

Crafting an effective CV



“Live Online Teaching Version,”
April 9, 2020,” by Stephen Fischer,
Career Counselor & Staff Trainer

EPFL Career Center
in collaboration with



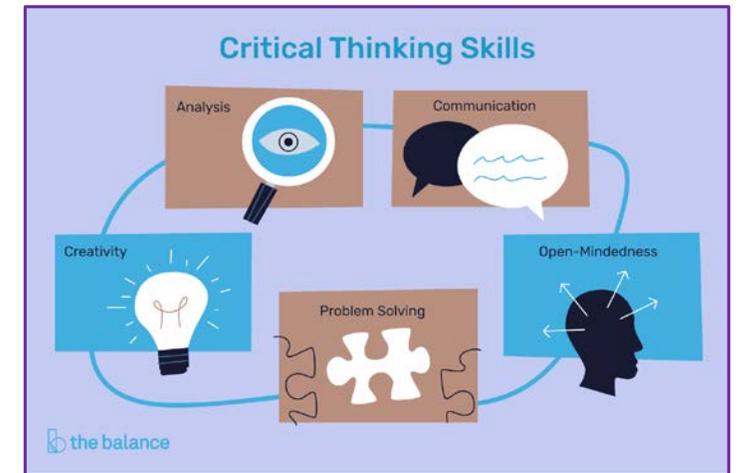
Today's objectives

We need your help in making this "online experience" valuable, so please participate during and just after the session, and take a few minutes to answer the short quiz at the end, too.

Our goal is to help you develop critical thinking about your application documents, and in particular your CV.

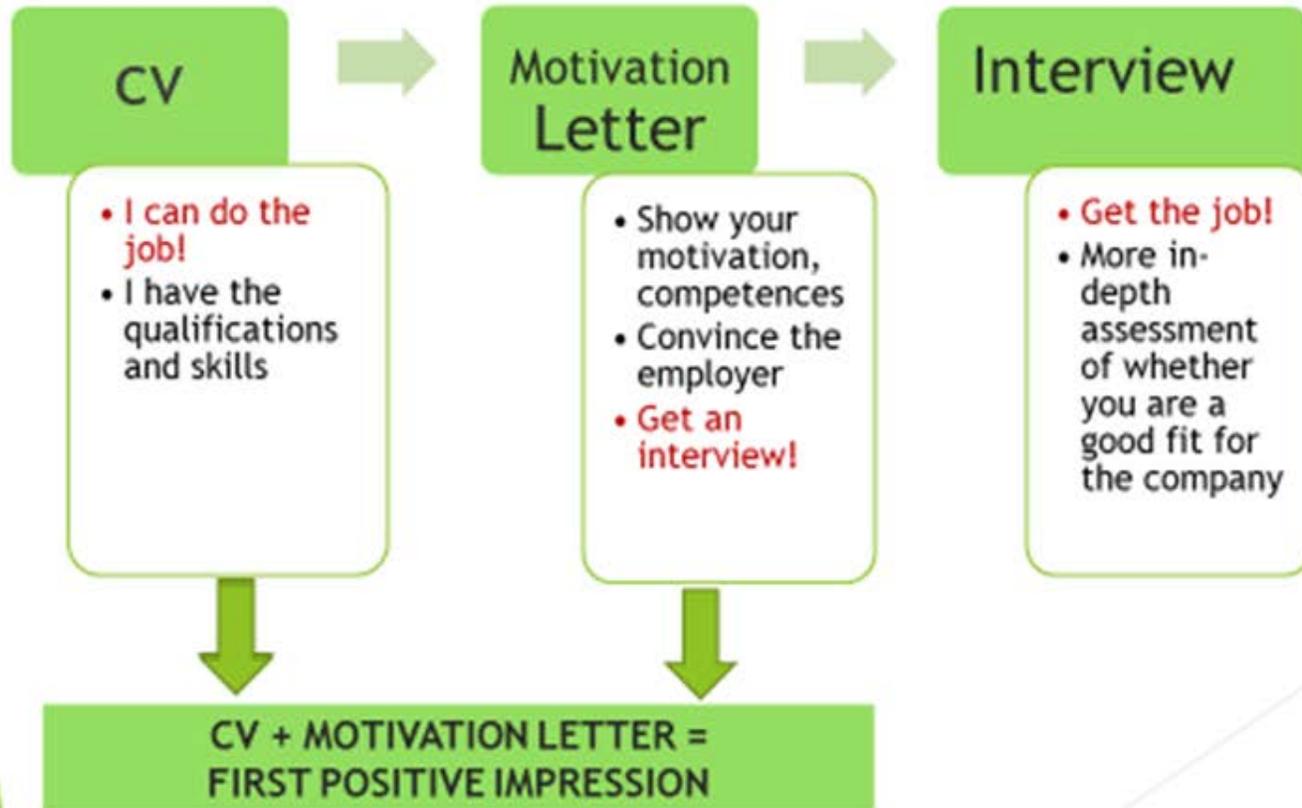
Based on a cumulative experience of 20+ years, we'll show you "best practice" approaches.

- Pundits frequently disagree
- Literature almost exclusively written by recruiters, not candidates
- Job markets and recruitment techniques continue to grow more complex



Google search for "effective CV for engineers:" 13.4 million results (0.41 sec's); if you take 60 sec's to consult each = only **25.48 years...**

THREE-STEP APPLICATION PROCESS



Courtesy of: Rosemarie Andrey, Business Communication Expert
(used by permission)

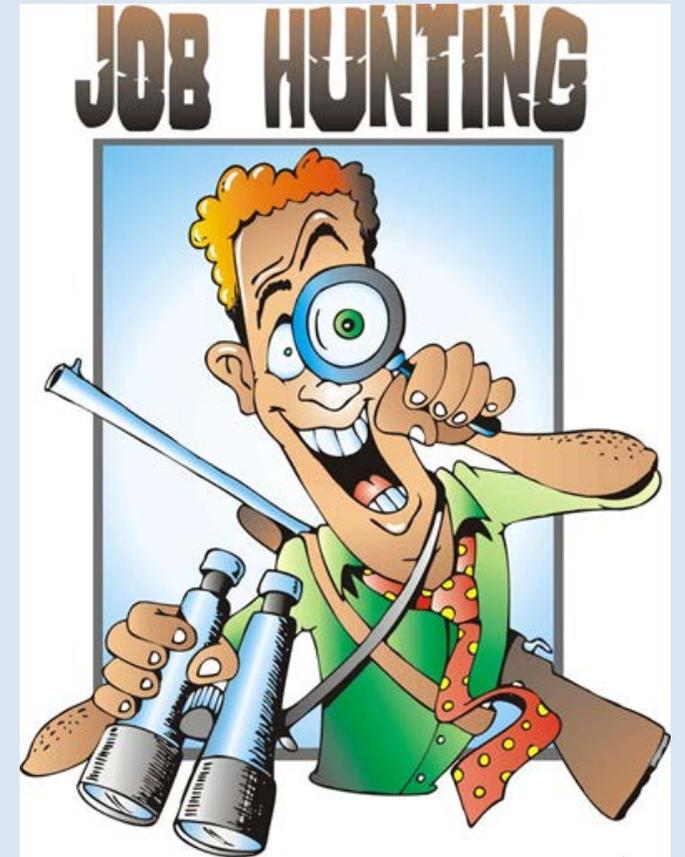
“Typical” application documents

- Curriculum Vitæ, with photo
- Letter of motivation (*not* “cover letter”)
- Copy of latest degree (or letter announcing award);
not transcripts, unless requested!
- Work or internship certificate(s)
- One reference letter, preferably from industry

Today, **83%** of recruiters in Switzerland, and **94%** in the USA, will immediately consult your LinkedIn profile if they are interested in your CV. Also true for networking; don't miss our separate conferences on LinkedIn...

Anything else can be sent later: it's a good thing when the HR *needs* more...

NB: job site reference codes must be on titles of all docs when mentioned (i.e. ads on JobUp). *See last slide for example.*



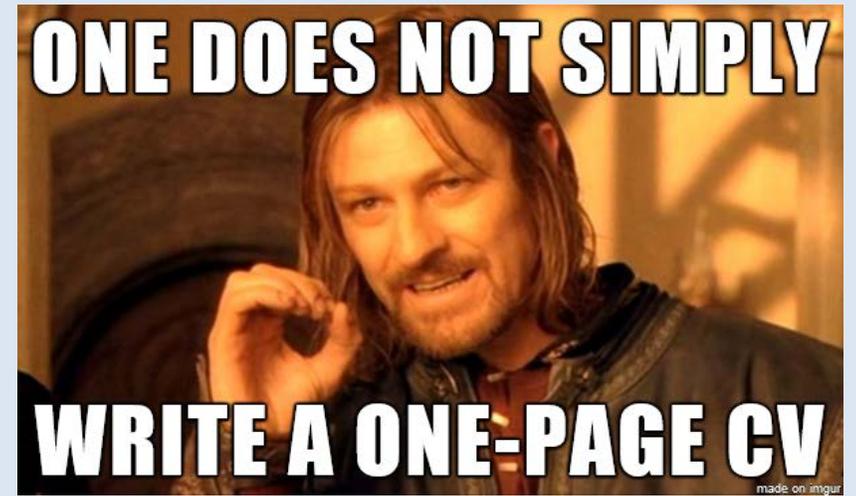


Recruitment practices: the standard process

The recruitment process includes several steps:

- Sending your application packet
- If seen as positive, your profile on LinkedIn is checked, too
- Online questionnaire and/or submitting an essay
- Pre-screening by telephone or Skype
- Interviews (first with generalist, following with higher level personnel and/or panel)
- Psychometric tests (intelligence, personality, behavioral preferences)
- Assessment center or selected exercises (case study, roleplays, public presentations, etc.)

Employers want to limit the risk of making a bad selection, which is extremely costly. In an estimated 60% of cases, an interview is supplemented by an additional form of evaluation (*Lee Hecht Harrison, 2013*).



Our focus today is on the key tool in your application kit: an effective CV for industry!

Recruitment practices: expectations

CV answers the first one, and hints at the rest

Your interlocutors need to know

- If you can do the job
- If you *will do* the job
- If you have the potential to do more
- If you are likely to integrate well with the team

Some expectations may not be stated, as they do not relate to the candidate's capacity, but may still disqualify him/her (age, gender, civil status, nationality, etc.).

For this, they will focus on

- Your knowledge (technical expertise, key skills)
- Your savoir-faire (experience, workstyle and work ethic)
- Your self-knowledge (personality and character)
- Your motivation for the post and for the company

According to each person's role (recruiter, future colleague, manager), and on the company culture, the relative importance of each can vary widely.

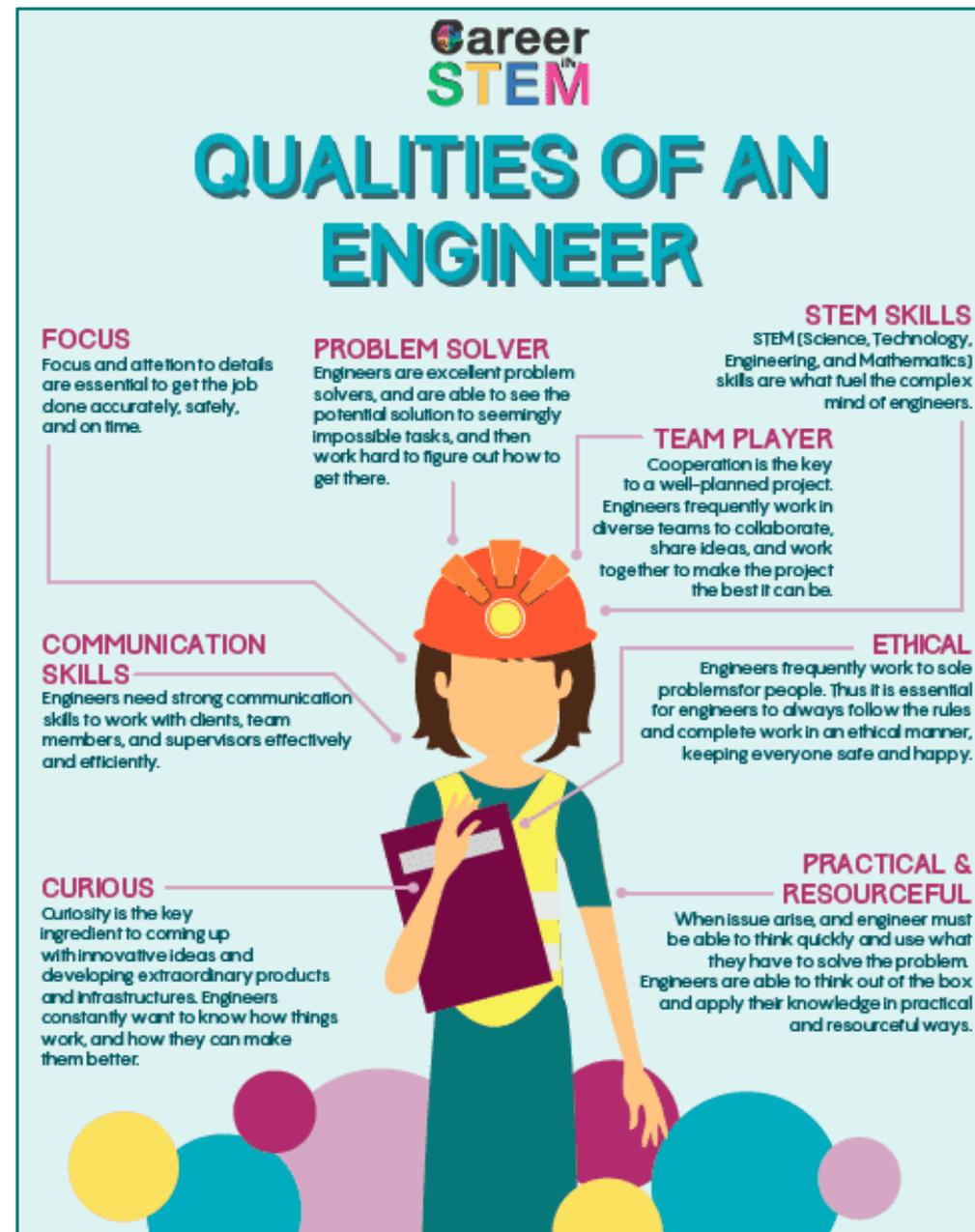
Remember: this is a two-way process, and you are exploring a mutually satisfying relationship.



Communicating value: this starts with your belief in the value you will bring to your future employer

As a young professional, you will be hired primarily for your technical skills, though “soft” skills will also be taken into account in the final selection process.

No one can guess at what you have done: you must communicate in detail your key skills at the top of your CV, and all of your competencies in the descriptions of your experience to date as well as in the “Technical Skills” section of your CV and in your LinkedIn profile.



ROI is not just a king in France...



While recruiters often muddy the water, the fact is, you are not in the same category as other new hires...nor should you be!

<https://www.ere.net/the-business-case-for-hiring-college-grads-reasons-they-can-produce-a-high-roi/>

The Business Case for Hiring College Grads — 32 Reasons They Can Produce a High ROI

ere.net/the-business-case-for-hiring-college-grads-reasons-they-can-produce-a-high-roi

By Dr. John Sullivan December 12, 2011

December 12, 2011

College hiring is about to ramp up again — and the very best college recruiting organizations would argue it ramped up several months back — so now is an opportune time to conduct an ROI analysis to determine when and where you should hire college grads instead of experienced hires. Understanding the unique competencies and skills that college students bring to a business is important not just in determining the number needed, but where to place them.

As a college professor and someone that advises firms on the design of college recruiting programs, I have come up with a long list of the advantages of hiring college graduates.

If you're not seeing these attributes in your recent college hires, in recruiting, the problem is most likely a result of major weaknesses in the hiring process and not with "this latest generation" of college students.

The Business Benefits of Hiring Recent College Grads

The benefits are split into two categories 1) benefits to individual hiring managers and 2) benefits that may accrue to the entire firm over time. Note that the possible outcomes listed here are based partially on generalizations that cover many but not all top college hires.

Shorter-term Benefits of Hiring College Students

- 1. Lower salary costs** — most are willing to work for significantly less salary than "experienced hires."
- 2. Continuous learners** — because they have a recent history of learning, they are self-motivated "continuous learners." This may actually be the most important competency.
- 3. Comfortable with technology** — New grads expect to use technology and have no fear of it. They learn new technologies rapidly, and this, combined with their extensive knowledge of the latest hardware and software, automatically makes them a high-value hire both for current and future needs.
- 4. Comfortable with the Internet and social media** — college students are much more likely to be comfortable with social media and mobile applications, particularly the emerging area of social media and mobile applications.
- 5. High levels of innovation** — there is a great deal of academic research indicating

**Your CV needs to
"sell" your
value...which we
know is
substantial!**

Effective CV's Online Forum Skills Week 2020



This is written specifically for CTOs. Engineering managers and engineers will also find this useful.

Engineer return on investment (ROI)

If an engineer's salary is \$150k USD ⇄, their fully loaded cost is 1.5x ⇄, approximately \$225,000 USD. This engineer's return on investment should be at least 3x ⇄, meaning \$675,000 USD annually.

We will use this engineer's fully loaded cost as the basis for the rest of our calculations. **Drag ⇄ the blue numbers** to make adjustments. **Your changes do not leave your computer.**

For reference, Google makes ~\$1,200,000 USD in revenue per employee.*

How much is an engineer's time worth?

- 1 hour is worth \$117.18 USD.
- 8 hours are worth \$937.50 USD.
- 5 work days are worth \$4,687.50 USD.
- 3 months are worth \$56,250 USD.
- 1 year (48 weeks) are worth \$225,000 USD.

<https://engineerworth.com/>

* via
Business
Insider /
Company
Filings

Real costs of bad hires...

THE PAINFUL COSTS OF A BAD HIRE

69% of companies have been negatively affected by a bad hire

Top 5 Negative Effects

- Lower productivity - **39%**
- Lost time finding and training a replacement - **39%**
- Cost of finding and training a replacement - **35%**
- Negative employee morale - **33%**
- Negative impact on clients - **19%**

Perfect match

Making the right hire and the cost of getting it wrong

Poor hiring decisions are common, but employers often underestimate their impact.

85%
of HR decision-makers admit their business has made a bad hire.

1 in 3 HR decision-makers whose business hired the wrong person for a manager, director, or senior official role think it cost their business nothing.

£0
1 in 5 HR decision-makers 'don't know' how much a bad hire costs.

£ A POOR HIRE AT MID-MANAGER LEVEL WITH A SALARY OF £42,000 CAN COST:

£28,000 WASTED SALARY	£9,625 LOST PRODUCTIVITY OF NEW EMPLOYEE
£1,500 WASTED TRAINING	£29,160 LOST PRODUCTIVITY OF TEAM
£9,730 RECRUITING AND TRAINING NEW EMPLOYEE	£54,000 STAFF TURNOVER
TOTAL	
£132,015	

HOW CAN YOU GET HIRING RIGHT MORE OFTEN?

PROMOTE A FLEXIBLE AND INCLUSIVE WORKFORCE

IMPLEMENT SOFT SKILLS ASSESSMENT TOOLS

PROPERLY INDUCT NEW RECRUITS

The REC's latest report, *Perfect match – Making the right hire and the cost of getting it wrong*, delivers insight to help employers get hiring right more often.

www.rec.com/perfectmatch
#RECperfectmatch

CV as Business Communication Tool

Your CV must show your ability to be concise and to **emphasize what matters**.

Your readers are industry experts: express yourself like a professional, not a student:

- Describe “**skills**” rather than “relevant courses” or “interests”
- Detail “**results**” rather than “tasks”
- Mention constraints met (time, budget, quality)
- Avoid too many mentions of Academia

Be concrete. Vagueness is your enemy.

***Most recruiters are not technical or research specialists.
Don't expect them to intuit what you haven't put in writing.***



CV in dangerland: facts and figures

1/3 recruiters spend **60 seconds** or less on a CV before deciding what to do with it.

55% prefer CVs structured in *reverse chronologic order*. Functional CV's are less appreciated.

Three main reasons to reject a CV:

- Not enough relevant experience (27%)
- Insufficient qualifications (22%)
- Poor presentation (12%)

Source: *Chiumento CV Survey, 2006*

"At graduate-jobs.com we surveyed recruiters from some of the biggest companies, including PwC, NHS and BP, and found the most common reason applicants get rejected is their (consistent!) failure to **tailor** (customize) job applications and CVs."

Source: *Warwick University "Careers Blog," 2013*



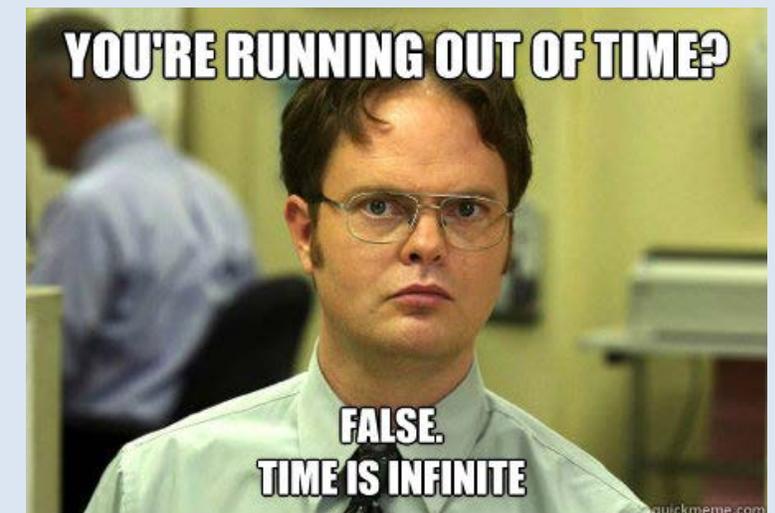
Valid reasoning, or poorly presented on CV?!

Your CV should demonstrate your ability to contribute and to get things done.

Every item that makes the recruiter want to meet you is welcome.

Anything that could reduce his/her eagerness should be avoided.

Form, style and "read-ability" (meaning, "do I want to read this thing or not?") matter as much as content.





“Resumé (or CV) killers”

Here are some of the biggest no-no’s that hiring pros say they see all the time:

1. Using a ridiculous email address: Your friends may know exactly why hairofthedogdude@yahoo.com is fitting for you, but recruiters and hiring managers may not be so amused.

2. Making spelling errors and grammatical mistakes: You will be hired in a role requiring attention to detail and accuracy, so not proofing your own documents discredits you from the start.

3. Including crazy fonts, colors and other graphics: Creativity is desirable in many jobs, but CV’s that look like art projects are not. Keep it simple and clear, and don’t use too many different fonts or blocks of color. Even for architectural or industrial design jobs, the best place for displaying your design skills is not in the application itself, but rather in a portfolio or via a link to a website with samples of your work.

4. Not using keywords: Terms particular to the job you want and the relevant skills you have should feature prominently on both your CV and your LinkedIn profile.

NB: “useful repetition” of technical skills, certifications and instruments in the descriptions of your experience will reinforce these.

Adapted from: <http://money.cnn.com/2014/11/02/pf/resume-red-flags/>

“Just **ONE** grammar mistake and your CV gets chucked”



Your CV must show your ability to be concise and to **emphasize what matters**, and wherever possible, talk about results—measured, or potential.

Industry-oriented CV

in reverse chronological order

(Header)

Strengths

- [Redacted]
- [Redacted]
- [Redacted]

Education

2014-present PhD in Robotics, EPFL

2014 Master in Informatics, EPFL

2012 Maturité scientifique (secondary diploma)

Professional experience

2014 Enterprise A: project X (internship)

2012 Enterprise B: project Y (summer job)

2010 - present Enterprise C: replacements

Technical Skills

- [Redacted]
- [Redacted]

Languages

- [Redacted]
- [Redacted]

Extra-curricular activities

- [Redacted]

Personal details

[Redacted]

Don't believe the "one-page myth!"
But here, it's PowerPoint! 😊

Header

First name, last name and contact details: postal address + one email, one telephone number

Strengths (Key Skills)

A summary of what you want the recruiter to focus on; should be adapted to each role/company. *ATS programs will pick up the key terms set in their search parameters!*

Education

Don't go further back than secondary school; if MSc in Bologna system, and no radical change, BSc not necessary (careful of "false friends!")

Professional experience (split into "Core & Additional")

List your most relevant experiences, including thesis/post-doc work

Technical Skills

Describe techniques/tools/industry processes, not only software

Languages

Level of proficiency, certificates, language travel

Extra-curricular activities

Limit yourself to the most interesting ones

Personal details

Citizenship (plus Swiss permit), age, civil status, driving license, military status (if male; no obligations = a small advantage)

Style & formatting

It also needs to look “clean;” well laid out + organized+ easy-to-read = want to read!
Don't overdo the design elements, though: most of you are not graphic designers!

Your first readers are often young HR staff, but the second readers are more senior, and may also be engineers or researchers, or have recruited for technical positions for many years: express yourself like a professional, not like a student:

- Describe “**technical skills**” rather than “relevant courses” or “interests”
- “Show, don't tell” soft skills in particular (contextualized examples, not lists)
- Detail “**results**” rather than “tasks”
- Mention constraints met (time, budget, quality)
- Avoid too many mentions of Academia

Most recruiters are not technical specialists. Don't expect them to intuit anything you have not expressed. Describe your projects and thesis in terms which **both** another tech person and a generalist can understand. If they want more detail, they'll ask you!

NB: many of your “first readers” are either quite junior, or “dinosaurs;” both notice typos, grammatical errors and “gaps” in a way that may seem unfair, but is common.



Out there...but if it works...

Joseph Chet Redmon

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612-799-5965
<https://pjreddie.com>

I'm a Ph.D. student at the University of Washington interested in computer vision, including object detection, image classification, and model compression.

Education

Ph.D. (in progress)	University of Washington	3.8 GPA	2013 - 2019
M.Sc.	University of Washington	3.8 GPA	2013 - 2015
B.A.	Middlebury College	3.7 GPA	2008 - 2012

Publications

YOLOv3: An Incremental Improvement
arXiv 2018
Joseph Redmon, Ali Farhadi
Cited by: 144

Who Let The Dogs Out? Modeling Dog Behavior From Visual Data
CVPR 2018
Kiana Ehsani, Hossain Bagheri, Joseph Redmon, Roozbeh Mottaghi, Ali Farhadi
Cited by: 2

IQA: Visual Question Answering in Interactive Environments
CVPR 2018
Daniel Gordon, Aniruddha Kembhavi, Mohammad Rastegari, Joseph Redmon, Dieter Fox, Ali Farhadi
Cited by: 26

YOLO9000: Better, Faster, Stronger
CVPR 2017, Best Paper Honorable Mention
Joseph Redmon, Ali Farhadi
Cited by: 1360

XNOR-Net: Imagenet Classification Using Binary Convolutional Neural Networks
ECCV 2016
Mohammad Rastegari, Vicente Ordonez, Joseph Redmon, Ali Farhadi
Cited by: 844

You Only Look Once: Unified, Real-Time Object Detection
CVPR 2016, OpenCV People's Choice Award
Joseph Redmon, Santosh Divvala, Ross Girshick, Ali Farhadi
Cited by: 2773

Real-Time Grasp Detection Using Convolutional Neural Networks
ICRA 2015
Joseph Redmon, Anelia Angelova
Cited by: 134

my LITTLE RESUME



COMPUTER SCIENCE & MATHEMATICS!

JOSEPH REDMON

University of Washington - CS
Box 352350
Seattle WA 98195-2350
pjreddie@uw.edu

This little pony went to Middlebury College, in Middlebury Vermont. He graduated with highest honors and even received a departmental award for academic excellence! While at Middlebury he cultivated an onslong love for...

For two years he worked as a tutor for the Computer Science department. He loves passing on his knowledae and gettingta everypony excited about computer science!



One summer he worked for the National Institute of Standards and Technology. He developed an online tool for analyzing thermal neutron triple-axis spectrometry data. He even had his very own nuclear reactor to play with!

The next year he had an Extreme Blue Internship with IBM. He worked with a team of interns at the Almaden Research Center to develop technology related to online shopping. But he's not allowed to talk about it too much! (He signed a non-disclosure)



After graduation he galloped off to Unalaska, Alaska to work as a radio DJ, and freelance web developer. He produces stunning, high quality websites for all the nice ponies hanging out in the Alaskan Bush.

For a few months he dabbled in domestication, working for a startup in San Francisco called ZeroCater. He spearheaded major projects, infrastructure upgrades and code cleaning frenzies while ensuring that thousands of hardworking ponies got quality, catered lunches of grains, oats, and grasses every day! The daily plough just wasn't for him though, so he threw off the bit and bridle and galloped back to Alaska. He still does contract work for ZeroCater on other companies on occasion, and in the fall he'll be heading off to a computer science Ph.D. program at the University of Washington!



The adventure is far from over... What will this little pony do next, who knows??

PONY STATS

Education

School: Middlebury College '12
Major: Computer Science
Minor: Mathematics
GPA: 3.74
Major GPA: 3.98

Favorites

Languages: C, Python
Editor: Vim
Subjects: Machine Learning, Computer Vision, Compilers

Awards/Achievements

Timothy T. Huang Award for Academic Achievement

3rd Place at ACM-ICPC BOSP
2 years in a row, 5th at NE North American Regionals in 2010

Top 10% in 4 separate Kaggle competitions, top 3% of active users



The TOP is *top* priority!



Zermatt is not known for its distinctive **base...**

You have only one chance to make an excellent first impression.

The layout and style count, and so do the quality of your photo, the grammatical correctness of your phrases, and the relevance of your profile to the needs of the company.

Most importantly, your key skills (“Strengths”) need to answer the first question each recruiter has, “Can this candidate *do* the job s/he is applying for?”

Drawing: <http://chrisbanford.com/>



Header and Strengths



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 alberta.einstein@bluewin.ch





Strengths

For your printed copies?



- **Data mastery: Pandas + Apache Flink & Storm**
- **Nano-fabrication and Micro-electronics**
- **Minor in Technology & Entrepreneurship**
- **Alloy specialist + ISO/TC 119/SC 2-4**



Objective: to contribute my expertise in **data processing, microelectronics** and **audio engineering**, with my cross-cultural **communication skills**, in an **international consulting** environment.



Objective: to get a first job in electrical engineering

Header

- First and last names, postal address, telephone, email (**not EPFL**)
- Photo generally on upper-right
- **Skype** (a must for screening) & button for **LinkedIn** (a plus!)
- Put personal information (age, marital status, nationality) elsewhere
- Avoid non-professional email addresses (e.g. king_bozo@2kewl4u.com)

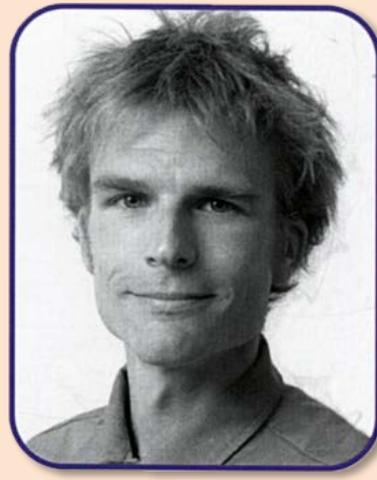
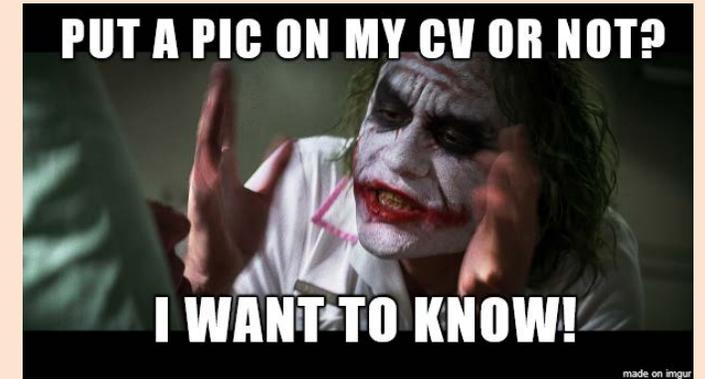
Strengths

- An impactful summary on what you want the recruiter to remember
- Can be combined with an objective, if it really says something about you (ex. 2), but must be dynamic
- “Lifestyle” or self-centered objectives alone have limited impact (ex. 3)
- When answering a particular job ad, focus on strengths, not the objective (your objective is to land the job)
- ATS programs will be set to look for key terms, usually linked to hard skills—it’s an advantage to have these listed in **several** places!

Really?! Maybe that's why you applied...

Should I add a photograph?

- Recommended as it's likely to be the only visual element and personalizes your CV
- The image projected can vary enormously depending upon the photo you choose
- An effective photo underlines both parts of your identity, "young professional"
- "Ugly" vs. "Normal" = 56% fewer job interviews (according to study in France) ¹



Not legal in US, UK, Canada...though with LinkedIn, Facebook, etc. now a nonsensical law.

¹ French *Observatory on discrimination in the workplace* "Testing sur CV (2004)." Photos: jobguide.ch



Real pictures...for *executive* posts!



Courtesy of



How well does the photo represent you?

The screenshot displays the photofeeler.com interface. The top navigation bar includes a 'New Test' button, a 'Sort' dropdown, and user statistics: 'Karma: Low / Credits: 100' with a 'Get More' button. The main content area is divided into two sections: 'All Photos' and 'All Tests'. The 'All Photos' section features a 'New Test' button and a grid of photo tests. The 'All Tests' section shows a grid of tests for a specific user, each with a photo and associated results.

Business Tests (Left Panel):

- Active (8/20 votes):** Competent 32%, Likable 51%, Influential 45%
- Business (40 votes):** Competent 89%, Likable 91%, Influential 90%
- Business (20 votes):** Competent 30%, Likable 39%, Influential 19%

Social and Dating Tests (Left Panel):

- Social (20 votes):** Confident 57%, Authentic 81%, Fun 60%
- Dating (20 votes):** Smart 20%, Trustworthy 50%, Attractive 42%
- Dating (20 votes):** Smart 39%, Trustworthy 47%, Attractive 57%

Business Tests (Right Panel):

- Business (20 votes):** Competent 48%, Likable 77%, Influential 52%
- Business (20 votes):** Competent 55%, Likable 64%, Influential 81%
- Business (20 votes):** Competent 72%, Likable 94%, Influential 78%

Social and Dating Tests (Right Panel):

- Business (10 votes):** Competent 82%, Likable 90%, Influential 73%
- Social (10 votes):** Confident 70%, Authentic 45%, Fun 73%
- Dating (10 votes):** Smart 97%, Trustworthy 90%, Attractive 61%
- Business (20 votes):** Competent 70%, Likable 91%, Influential 78%

Test your image:
www.photofeeler.com

in Search Home My Network Jobs Messaging Notifications

Ben Peterson • 3rd
Algorithm Engineer
Boulder, Colorado

✓ Pending ⋮

Photofeeler
Carnegie Mellon University - Tepper School of Business
See contact info
186 connections

Mathematician. Full-stack web developer. Optimization algorithms PhD and experienced algorithm designer and coder in academic, Fortune 500, and startup settings.

Go-to guy for unique mathematical challenges. Especially good at heuristics for "unsolvable" problems with vague objectives or data.

Presently co-founder and CTO of Photofeeler, a tool for testing profile photos (business, social, dating). Interested in advising or consulting other startups on their algorithm challenges.

Show less ^

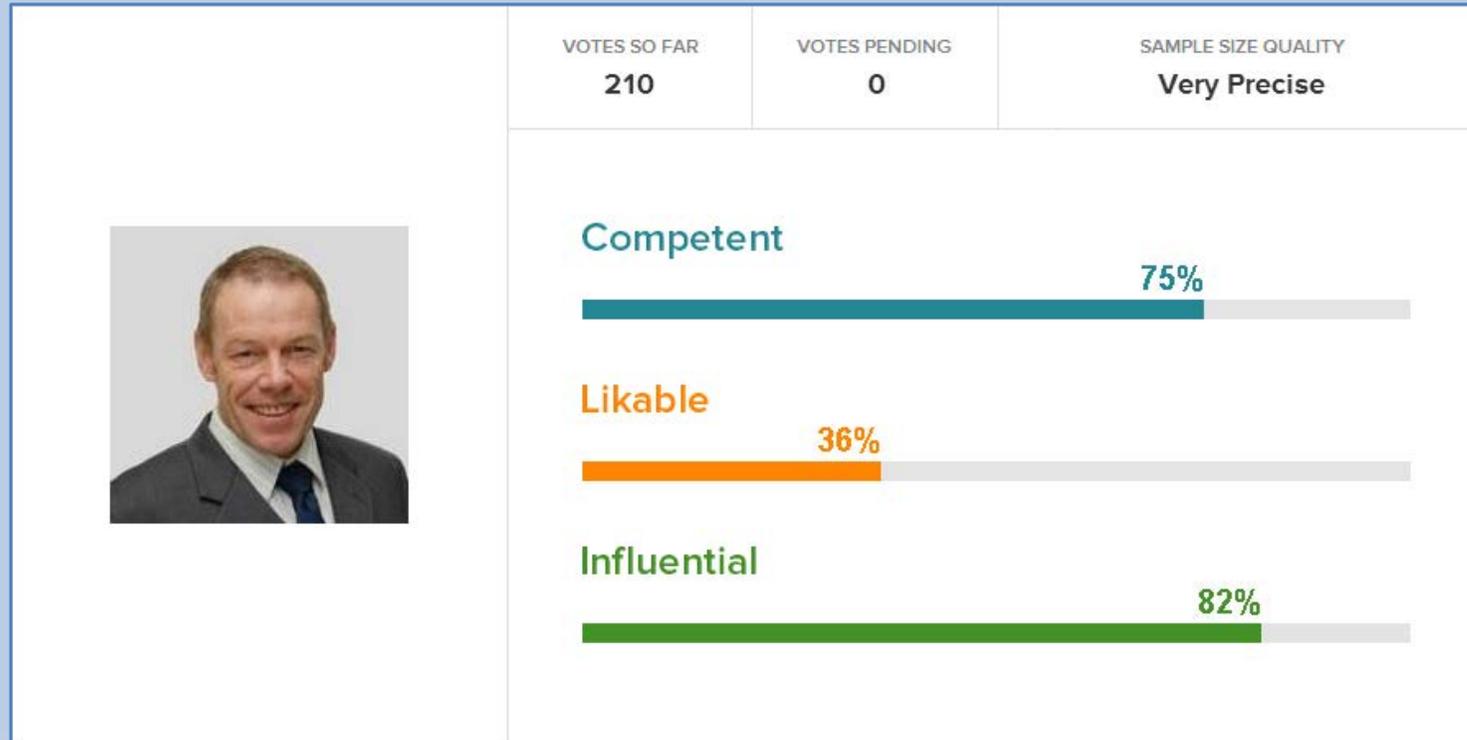
Like founder, like users?

Although the site offers the possibility to test image impact for both business and social (including dating sites like Tinder!), for job search purposes, the former is the one we're interested in.

Their service is free if you play the game, and responses are rapid; if you prefer to buy "votes" you can, too. We suggest loading several photos to see which gets the highest overall ratings.

With a database of more than 65k photos, they have analyzed dozens of aspects which can affect the impact of your photo.

Sacrificing my ego for the greater good?



www.photofeeler.com

Education & Experience

Education

- 2014 Master in Computer Science, EPFL
- 2010 - 2013 CS Engineering Studies at EPFL
One-year exchange at Carnegie Mellon University
- 2010 Maturité (option maths/physics), Gymnase XYZ

Professional Experience

- 2013 Company A: Java developer (Six-month internship)
- 2011-2012 Company B: Webmaster for startup in Lausanne
- 2011-2013 Lab C: Helpdesk technician (temp)

Contributions

- Bottom line
- Enhancements
- Savings (time, costs, material)
- Transformation

Education

- ✓ **Education** comes before **Experience**
- ✓ List degrees and honors explicitly
- ✓ Mention exchange periods abroad
- ✓ Don't go further back than end of secondary school, unless notable (e.g. studies were in another language)

Professional Experience

Emphasize

- **Contributions made**
- **Responsibilities and**
- **Constraints faced**

Give each experience the **weight it deserves** ("laundry list," i.e. too much detail for short-term post = risk losing value)

Teaching, summer/part-time student jobs: additional, not "Core" experience; which ones imply **transferable skills**?

Student associations: appreciated by employers when roles imply responsibility and dealing with external parties, but not usually listed under professional experience. If you managed a Solar Decathlon or Hyperloop team, that might be different!



Education (a)

x No

✓ Yes

Education

- 2019 Master thesis: "Ascertain nicotine rates in living cells using impedance measurement"
- 2017-2018 Specialization in Applied Photonics
- 2017 LMIS-EPFL: Automating glue dispersal on a translating flexible substrate (summer internship at EPFL)
- 2015-2016 Reading Micro-engineering at EPFL
- 2014 Secondary diploma
- 2011-2014 Secondary school, *Gymnase de la Cité, Lausanne*
- 2002-2011 Elementary school, *Collège du Martinet, Rolle*

Education

- 2019 Master of Science in Micro-engineering, *École Polytechnique Fédérale de Lausanne (EPFL)*
 - Major in Applied Photonics
 - Minor in Management of Technology
 - Academic exchange year at Imperial College
- 2014 Maturité (secondary diploma), *Gymnase de la Cité, Lausanne*





x No

✓ Yes

Even in English, keep the initials; this approach gives you a "local brand!"

Education

- 2019 Master thesis: "Ascertain nicotine rates in living cells using impedance measurement"
- 2017-2018 Specialization in Applied Photonics
- 2017 LMIS-EPFL: Automating glue dispersal on a translating flexible substrate (summer internship at EPFL)
- 2015-2016 Reading Micro-engineering at EPFL
- 2014 Secondary diploma
- 2011-2014 Secondary school, *Gymnase de la Cité, Lausanne*
- 2002-2011 Elementary school, *Collège du Martinet, Rolle*

Education

- Swiss Federal Institute of Technology, Lausanne (EPFL) 2019**
 Master of Science in Micro-engineering
 - Minor in Management of Technology
 - Academic exchange year at Imperial College (Spring 2018)
- Gymnase de la Cité, Lausanne 2014**
 Maturité (secondary diploma); Science Section

Simple & to the point: with your "local flag" first, and the date last...

Core vs. Additional Experience

X No

New category, adding emphasis & focus

✓ Yes!

Professional Experience

- 2011 Design of a motor oil film thickness measurement system (BOSCH Research Institute, 1027 Lonay)
- 2009 City of Lausanne (Housing Service) – City of Lausanne (Internet Group) – ACM (Archives de la construction moderne EPFL):
 - Design and development of the City of Lausanne Housing Service website
- 2007 Teaching Assistant for electronics practicals (Electronics Lab EPFL)
- 2007 School of Computer and Communication Sciences EPFL Teaching Assistant for a web design course for girls
- 2008 Assistant-Surveyor, Lausanne Power Authority
- 2005-2009 Sales clerk at McDonald's on Saturdays

As with your "Strengths," customize this part of your CV for each position you apply for...

Core Experience

Powder Technology Laboratory (LTP), EPFL "Design of spectacle components in shape memory alloys." 2016-present
Doctoral Thesis

Concept to prototype modelling in C++ of Ni-Mn-Ga alloys with optimized twin microstructures. Based on my work, the host company is currently developing model prototypes.

2015

BOSCH (3-month internship)

Design of a new motor oil film thickness measurement system using laser-induced fluorescence. Validated proof-of-concept in < 3 months, with precision enhanced by 35% vs. the previous system.

Lausanne Power Authority: Assistant-Surveyor.

Surveyed underground electrical networks and entered the topographic data in AutoCAD.

2013

Additional Experience

City of Lausanne (part-time 20%)

Design and testing of the City's Housing Service website, on a very tight budget with focus on maximum quality. The website was successfully launched in October 2009.

2014

Electronics Lab, EPFL

Teaching Assistant for electronics practicals (EN and FR).

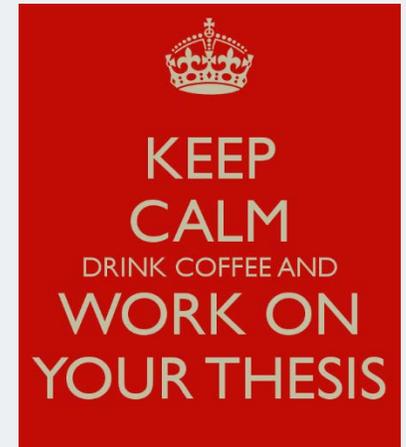
2012-14

Pix4D, Lausanne: plat survey review project (summer intern).

2012

Where do I put my thesis?

MSc students: with your internship, your TM is most likely your main experience to date



- All academic titles should be listed under “Education.”
- A description of your thesis work can be placed either in the traditional “Academic Projects” section, or, better, in the
- **“Professional/Core Experience”** section, especially if linked to industry (or done within a company);
- Can be adapted re. company/post you are applying for.

"Selling" your thesis to industry



"My objective was to determine the main parameters of the dynamics of molecules during a chemical micro-reaction in a helium droplet. In a very short timeframe, I developed a powerful yet simple model that predicts the resulting stereoisomers with 40% higher precision than traditional methods. This could lead to significant savings for the chemical industry. I was also involved in the purchase of mission-critical lab equipment, and negotiated a 20% price discount."

- ❖ Describe your work clearly, in terms which a generalist can understand, but which would also make sense to another engineer/scientist.
- ❖ Explain your responsibilities in terms of project management: timeline, budget, team/meetings/role/language(s), innovations, extra tasks + evaluation (successful? how did you know?).
- ❖ Emphasize results and other contributions, including "hidden duties or responsibilities." Describe any potential economic implications.
- ❖ Teaching and supervising MSc theses are less important (add under "Additional Experience").
- ❖ If linked to industry (patents, partnerships, mandates) highlight this; otherwise describe outcomes in terms of potential commercial impacts.

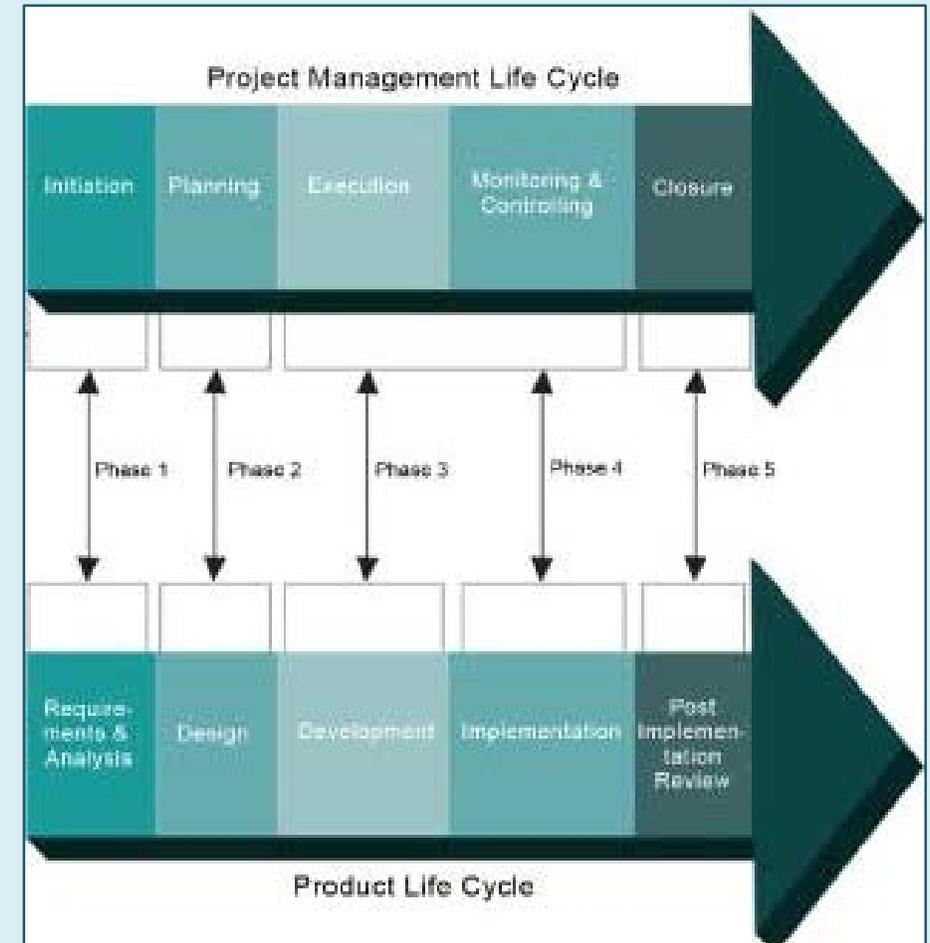
Your thesis in terms of project management

The 5 Phases of Project Management

Project Life Cycle

The 5 Phases of Project Management is also called the **Project Lifecycle**. The 5 Phases of Project Management consist of:

- ❑ Project Initiation Phase
- ❑ Project Planning Phase
- ❑ Execution Phase
- ❑ Monitoring and Control Phase
- ❑ Project Closeout Phase



NB: describe your thesis in five sentences or less, in terms of project management, with constraints, key responsibilities, budget and results.



Techniques, Methods & Skills: your USP's!

Be complete & consistent: here and on LinkedIn!

Technical Skills

Material Synthesis Processes

Magnetron Cathode Pulverization, Electric arc, melt-spinning

Physical and Structural Characterization Techniques

Transmission Electron Microscopy (TEM) in traditional and high-resolution modes (HRTEM), Energy-dispersive X-Ray spectroscopy (EDX), XPS and SIMS Spectroscopy, X-Ray Diffraction(XRD), Atomic Force Microscopy (AFM), Scanning Electron Microscopy (SEM)

IT : EMS, LabVIEW, Cerius2, Image-Pro. Good command of several other image analysis / image processing programs. MS Office (XP-W10; PC and Mac)

Project Management:

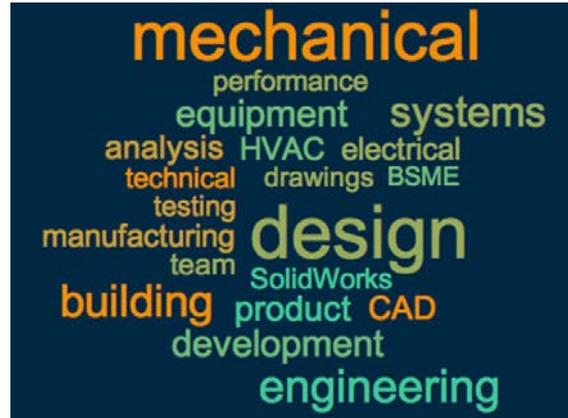
Logistics, coordination, budget control for international hydrofoil competition (see "Core Experience"). Supervised five MSc thesis students (one patent pending).

Technical Skills

- Particularly important for recent graduates
- Mention key *technical* & *project management* skills
- List of skills acts as a **repository of keywords** indexed by *Applicant Tracking Systems*
- **IT Skills:** priority to specialized software used in industry/sector (+ acronyms when common)
- **Data Science:** programs, tools, methods, cluster computing, data libraries
- **IP** (patents), Euro lab levels, ISO certifications, etc. all "money in the bank" for future employers
- Don't forget Clean Room, Wet lab, en vivo, SQL, stochastic analysis, etc.

Add "soft" or business skills

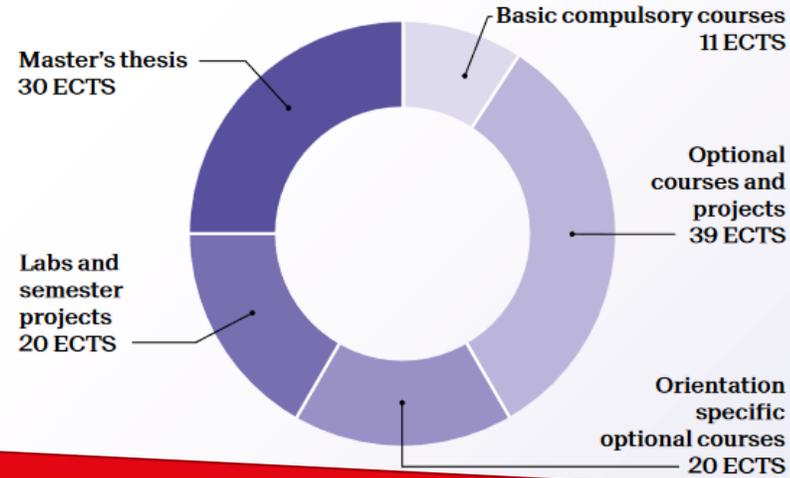
Your "toolkit" is likely to get you the job!



What the school says you've learned...

The mix of what a mechanical engineer knows...

Master of Science in **ROBOTICS**
2-year program - 120 ECTS



The program includes a compulsory industrial internship with a minimal duration of 8 weeks.

Students must choose 20 ECTS of optional courses in one of these three orientations:
A Industrial robotics
B Medical robotics
C Mobile robotics

The optional courses and projects (39 ECTS) include either:

- Optional courses (19 ECTS)
- 1 semester project (10 ECTS)
- 1 interdisciplinary project or more optional courses (10 ECTS)

OR

			Credits
Basic compulsory courses			11
Applied machine...			4
Basics of mol...			4
Model predi...			3
Optional courses and projects	C		59
Advanced com...		C	3
Advanced machi...		B C	4
Advanced MEMS &		C	3
Advanced satellite posit...		C	4
Analyse de produits et systèmes	A		2
Analysis and modeling of locomotion		B C	4
Biomaterials		B	4
Commande embarquée de moteurs	A		2
Computational motor control		B C	4
Computer vision	A	B C	4
Conception mécanique intégrée	A		3
Continuous improvement of manufacturing systems	A		4
Controlling behavior in animal and robots		B C	4
Deep learning	A	B C	4
Distributed intelligent systems		C	5
Embedded systems	A	B C	4
Evolutionary robotics		C	3
Flexible bioelectronics		B	4
Flying robots		C	4
Fundamentals of computer aided manufacturing	A		5
Fundamentals of neuroengineering		C	4
Haptic human robot interfaces	A		3
How technology shapes the workplace of the future	A	B C	3
Image analysis and pattern recognition		B C	4
Image processing I		B	3

Young professionals are hired for their current skills and their potential to continue learning new ones!

Data is king—across all sectors!



A tool is only as good as the person who uses it. Don't forget data libraries, super-computer crunching, pre-programmed instruments or machines, safe cloud computing and machine learning.

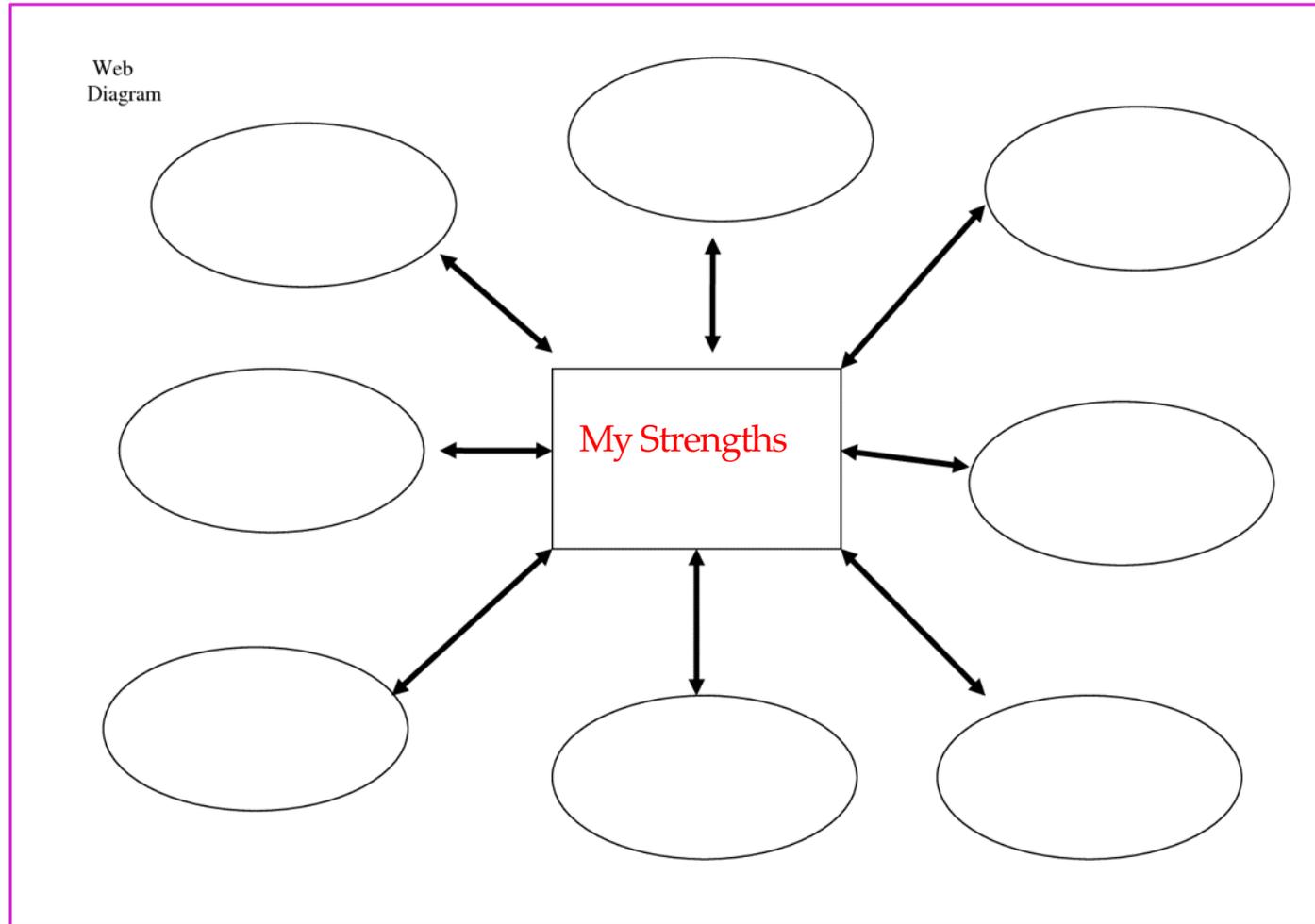
Internship and first job after EPFL: you will be hired for your skills, not your experience!

Got it? Flaunt it!

- Prince2 or PMI certification for project management
- MOOC's and Coursera for QA and data science:
<https://www.class-central.com/tag/quality-assurance>
- Technical writing certification:
<https://www.wordrake.com/blog/thinking-technical-writing-certification-3-consider>
- List all lab and machine certifications
- Health and (lab) safety training, first aid, chemical and electrical; other specialized systems training (formal & informal)
- **Patents** pending or obtained!



As you read job ads, note the top skills requested, and if you have these but haven't yet listed them, add them to your CV and to your LinkedIn profile!



Check LinkedIn profiles of Alumni with 3-5 years' experience: what skills do they show and how do they describe themselves?

Spend 5-10 minutes writing, while listening to music (optional). Afterwards, using highlighters, group results to use in establishing your most relevant hard and soft skills--for your CV and LinkedIn profile.

Linguae: frankly!



Languages

English	Fluent spoken (C1) and written (C2) One-year exchange at Imperial College, London
German	Intermediate level spoken and written (B1) <i>Zertifikat Deutsch</i> from Goethe Institut.
French	Native language

- Accurate level of proficiency (modesty pays), certificates if any, language travels (place and duration).
- In Switzerland, 82% of ads mention language requirements. Learning or improving a Swiss language *during* your job search will be seen in a positive light by potential employers.
- Expectations are high & levels may be tested during interviews. Rate "Spoken" and "Written" and if different, note these: e.g. "Intermediate Spoken (B2), "Fluent Spoken (C2)"
 - Use auto-evaluation grid from EuroPass:
<https://europass.cedefop.europa.eu/sites/default/files/cefr-en.pdf>
 - Evaluate your proficiency with DIALANG:
<http://www.lancaster.ac.uk/researchenterprise/dialang/about> OR
 - On Ecole Club-Migros site:
<http://www.ecole-club.ch/Themes/tests-d-evaluation/test-de-langue>

Separate from other skills, so they are easy to find.

NB: lead with most important language for job, or language of your CV.

Extracurricular activities

Extracurricular Activities

- Gilly Football-Club, treasurer; trainer for junior championships (six years)
- Advisor to the local Boy Scout troop for five years
- 10k and half-marathon (team & individual)
- Subscriber to *Nature* and *The Economist*

Personal Information

26, single, Swiss and French citizenships.
Discharged from military service. Swiss driver's license (Type B).

References available upon request (optional)

This section is a "gift to the generalist," and allows for a non-technical closing to your job interview. S/he also wants to know how you stay healthy, and whether you'll fit in with "their" team... both impacting the bottom line!

Personal interests ¹

Perceived images:

Team Sports: stamina, competitive spirit, team spirit, willingness to go beyond limits; Switzerland may be the only place where extreme sports are well seen!

Arts: emotional intelligence, sensitivity, creativity, openness;

Group activities/associations: interpersonal and communication skills, leadership; difference between membership vs. role with responsibilities.

Some recruiters jump to conclusions:

Individual sports only = lack of team spirit

Volunteering in humanitarian orgs = not business-oriented

Solo hobbies = unable to socialize

"Movies, reading, music" = conformist type, lacks creativity.

- Don't be "falsely modest;" state your achievements!
- Do not mention political affiliations or religion.
- Add online news or magazines you read regularly.

¹ not "hobbies," which has negative connotation

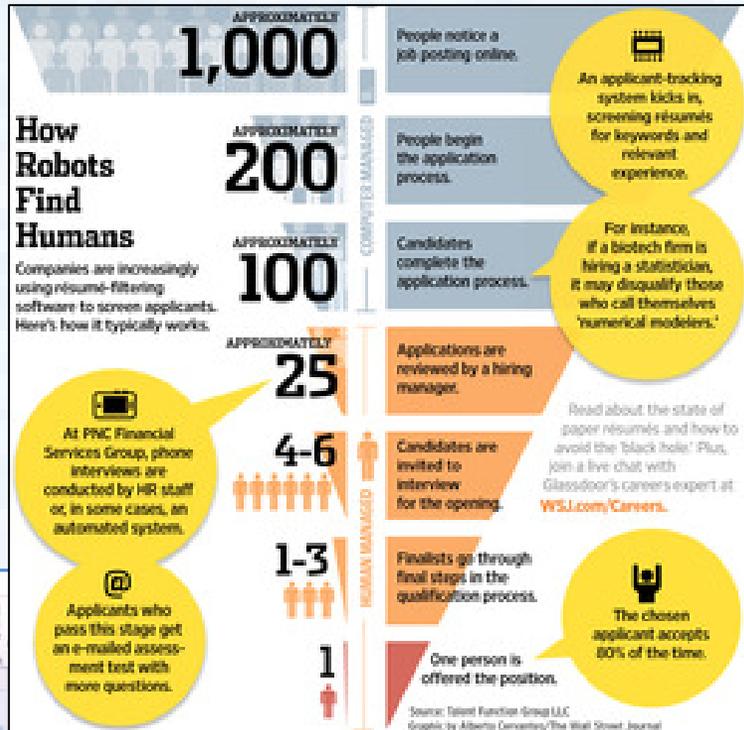
Applicant Tracking Systems

CV's sent by email or uploaded on a company website are often analyzed by specialized software (*parsers*), especially if you've made a spontaneous offer...¹

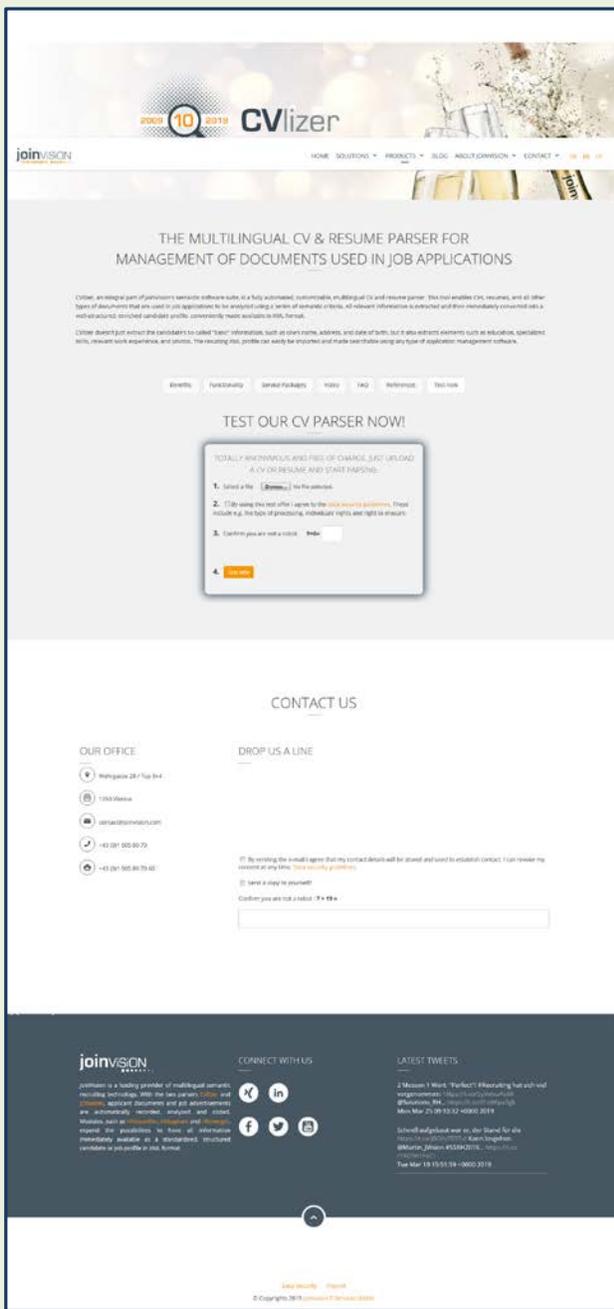
Collected profiles are stored on a searchable database which allows recruiters to find specific profiles/skills (usually timed out @ 90-180 days)

Providers

- ATS: Taleo (Oracle), Kenexa (IBM), NetMedia, SuccessFactors (SAP), Peoplefluent
- Resume Parsers: Sovren, Daxtra, BurningGlass, HireAbility, Textkernel



¹ How many does Nestlé get per month?



Test the potential impact your CV is likely to register on an ATS: free parser at www.cvlizer.com

NB: you must use codes linked to job ads and have your name on all docs so the systems can find your application materials! If you follow our advice about listing your strengths, having a comprehensive list of your technical skills and include them in your descriptions of your experience (= "useful repetition"), you should not need an ATS-optimized template.

Spontaneous offers: old-fashioned style

For your top 10%:



Call first (1818, if not on web) to ask whom you should address.

Send by postal mail:

- A4, not folded, priority mail (2.4 CHF)
- CV + documents in plastic cover
- Letter on heavier paper, slightly different color, signed by **hand**

Follow-up by phone in 10 days: restate your interest & ask if they need anything else from you.

92% of Swiss companies are SME's, many founded by EPF(L) Alumni.

Effective CV's_Online_Forum Skills Week_2020

Stephen Fischer_CV

41

Mayon

Quick checklist

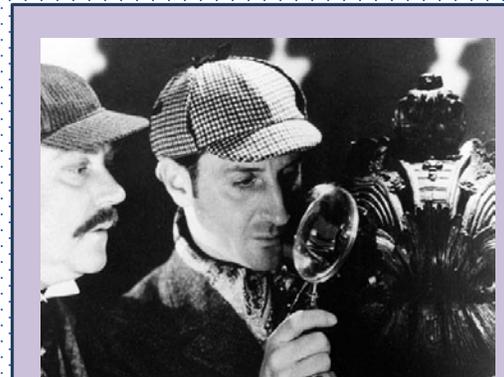
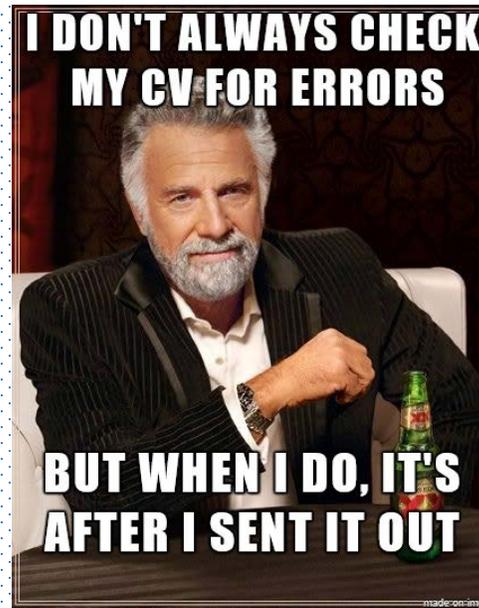
Adapt your CV for each sector or job you apply for:

Emphasize most relevant items and reduce importance of others.

The more technical the job, the more detailed your list of tech skills should be.
The opposite also applies.

Publications, posters, conferences → only for academic or research positions (where a PhD is frequently required).
Know the culture: PMI vs. MindMaze...

Publications, teaching or supervising at **MSc** level, however, is unusual & should be included!



NB: always ask a peer to proofread and give feedback; when ready, view your CV on screen, then print it in both black & white and color.

Contents:

Relevance, Conciseness, Consistency

Clearly separate **Education** and **Experience**
Don't go overboard with detailing professional experience

Group together multiple experiences with the same employer

Form:

Spelling and grammar do **count**.
Don't use **cool fonts**; don't overuse **Bold**, *Italic* or Underlining

A good layout helps with the reading.

Templates save time:

300 in **Word**: <http://www.hloom.com/>

20 in **LaTeX**:

<https://www.sharelatex.com/templates/cv-or-resume>

Save your document with your name:

Fischer_S_CV 2018

Or

Fischer_S_CV_Réf. J1-EP-47

Mischa Weber

born on the 19th of February 1993, Swiss citizen

Environmental Engineering student at the Swiss Federal Institute of Technology Lausanne (EPFL) with a Minor in Management, Technology and Entrepreneurship



Education

09/2018 – today	École Polytechnique Fédérale de Lausanne (EPFL) Master of Science in Environmental Engineering, Minor in Management, Technology and Entrepreneurship
09/2013 – 12/2016	Swiss Federal Institute of Technology (ETH), Zürich Bachelor of Science in Environmental Engineering major subject: soil protection bachelor thesis: Influence of Calcium Chloride Concentration and Changing Redox Conditions on Mercury Release Potential in Soils from the Upper Valais, Switzerland, Grade: 6
08/2008 – 07/2012	High School (Gymnasium), Küsnacht, Switzerland Matura linguistic profile, major subject: Italian maturity project: Minerals in Alpine Chasms

Working Experience

05/2018 – 09/2018	Yayasan Bina Sarana Bakti, Cisarua, Java, Indonesia Civil Service; Planning, construction and monitoring of a biological wastewater treatment plant (constructed wetland)
09/2017 – 02/2018	FRIEDLIPARTNER AG, Zürich Internship in the divisions geotechnics, soil protection/contaminated sites and building pollutants
06/2017 – 08/2017	Polytechnic University, Hong Kong Trainee at the Department for Civil- and Environmental Sciences; Planning and execution of a scientific project
04/2017 – 06/2017	Swiss Federal Institute of Technology (ETH), Zürich Scientific Assistant at the Institute of Biogeochemistry and Pollutant Dynamics (IBP)

“Before;” what would you change?

“After;” what do you think, now?

Mischa Weber

Avenue du 1er Mai 12
1020 Renens
+41 (79) 574 37 65
weber.mischa@gmail.com
[LinkedIn](#) | [Skype](#)



Strengths

- Water treatment systems specialist
- Data processing and management + MTE
- Cross cultural working experiences



Education

2018 – present	Swiss Federal Institute of Technology, Lausanne (EPFL) Master of Science in Environmental Sciences and Engineering, Minor in Management, Technology and Entrepreneurship
2013 – 2016	Swiss Federal Institute of Technology, Zurich (ETH) Bachelor of Science in Environmental Engineering, Major in Soil Protection

Core Experience

2019 – present	Laboratory for Biological Geochemistry (LGB), EPFL Data analysis project: Investigating in correlations between urbanisation and environmental and social trends in Africa in order to predict different impact scenarios using Python, NumPy and QGIS.
2018 – 2019	Soil Mechanics Laboratory, EPFL / Romande Energie “Technical and Financial Analysis of Deep Geothermal Heat Production in Epalinges” Determination of the deep geothermal potential for various technical systems using an infinite line source model. Estimation of investment- and operational costs and performing an economic evaluation of geothermal heat exploitation using a probabilistic approach. Study of regulatory constraints and potential contributions. The conclusions from this project added significantly to the decision making process of a multi-million dollar energy project of Romande Energie.
2018	Yayasan Bina Sarana Bakti, Cisarua, Java, Indonesia (5-month civil service) Budgeting, planning and construction a biological wastewater treatment plant (constructed wetland) under tight budget and time constraints. Leading a team of 5 construction workers, communicating only in Indonesian.
2017 – 2018	FRIEDLIPARTNER AG, Zurich (6-month internship) Analysis of legacy contaminated sites and hazardous building pollutants. Developing sampling concepts, analysis and interpretation of laboratory data, drawing of arranged plans (Vector Works) and writing of structured reports. Organization of three training courses for specialists in the field of building pollutant diagnostics. Monitoring of groundwater levels by means of electric gauges and data loggers; Data analysis and drawing of groundwater flow plans.
2017	Departement of Civil and Environmental Engineering, The Hong Kong Polytechnic University (PolyU), Hong Kong (2-month trainee) Research and Development. Conducting greenhouse experiments and investigating in the release mechanisms of nutrients from struvite into the soil solution.
2017	Institute of Biogeochemistry and Pollutant Dynamics (IBP), ETH Studying the formation and stability of metal sulphide nanoparticles (Cus, CdS) under reduced conditions using ICP-OES and ICP-MS (3-month scientific assistant). “Influence of Calcium Chloride Concentration and Changing Redox Conditions on Mercury Release Potential in Soils from the Upper Valais, Switzerland”, Bachelor Thesis, Grade: 6/6

Iurii Timrov, PhD

Address: Avenue de Riant-Mont 8, CH-1004 Lausanne, Switzerland
Date of birth: 14 August 1987
Email: timrov.iurii@gmail.com
Phone: +41786796879
Website: www.linkedin.com/in/iurii-timrov
Languages: English, French, Italian, Ukrainian, Russian



TECHNICAL SKILLS

- Methodological developments of novel numerical algorithms and approaches;
- Software engineering: design, implementation, optimization, testing, and debugging of complex codes;
- Programming using Fortran, Python, Shell/Bash scripting;
- Parallel computing using High-Performance Computers (HPC);
- Basic knowledge of Machine Learning / Artificial Intelligence;
- Version-control using Git (Github, Gitlab) and SVN;
- Data analysis using various scientific tools, Microsoft Office toolkit.

WORK EXPERIENCE

Research associate 02/2016 - present
Place: STI IMX THEOS, École Polytechnique Fédérale de Lausanne (Lausanne, Switzerland)

- Design and development of density-functional perturbation theory with Hubbard corrections for modelling of electronic, vibrational, and spectroscopic properties of correlated materials at the atomic level using the principles of quantum mechanics.
Added benefit: Thanks to the new approach which I developed, the quantum calculations can be done in an automatic manner; the simulations are speed-up by a factor of 2-5; the code is made user-friendly.
- Implementation of a novel numerical algorithm for calculation of Hubbard parameters and vibrational frequencies of atoms in the lattice using perturbation theory, by substantially extending the most widely used open-source electronic-structure code for materials modelling **QUANTUM ESPRESSO**.
Added benefit: The codes which I developed and implemented are public, therefore hundreds of researchers worldwide use them and publish the corresponding results of simulations in the prestigious peer-reviewed international journals.

Research associate 07/2013 - 01/2016
Place: Condensed Matter Sector, Scuola Internazionale Superiore di Studi Avanzati (Trieste, Italy)

- Design and development of advanced numerical methods based on the Liouville equation, time-dependent density-functional perturbation theory, and the Lanczos biorthogonalization algorithm for modelling collective charge-density and spin-density excitations in solids.
Added benefit: The codes which I developed are public and widely used in the scientific community. The spectroscopic properties can be modelled significantly faster than other state-of-the-art approaches.
- Implementation of a novel numerical algorithm for modelling of color optical properties of natural dye molecules in the water solvent, based on the Davidson method. The new implementation is available in **QUANTUM ESPRESSO**. Work done in collaboration with *Mars Chocolate North America LLC*.
Added benefit: Thanks to the new method, it is possible to predict the color of organic molecules in the solution even without doing an experimental measurement.

“Before;” what would you change?

“After:” what do you think, now?

Iurii TIMROV

Research Scientist & Software Engineer

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+41 786 79 68 79
timrov.iurii@gmail.com
Skype: iurii_timrov
www.linkedin.com/in/iurii-timrov



STRENGTHS

- **Advanced developments:** novel numerical algorithms and theoretical methods
- **Software engineering:** design, implementation, optimization, testing, and debugging of codes
- **Quantitative data analytics:** interpretation and characterization of data
- **Project management:** coordination, multitasking, time management, international cooperation

TECHNICAL SKILLS

- Programming in Python, Fortran, Shell/Bash
- Version-control (GIT, SVN), MS Office, Latex
- Visualization tools: Xcrysden, Xmgrace, Vesta
- Cluster/cloud/distributed computing

PROJECT MANAGEMENT SKILLS

- The lead investigator of 3 computational research projects (CINECA, CSCS) 01/2014 - 12/2019
- Coordinator of the SNSF project “Accurate and efficient functionals for energies” 01/2018 - present
- Coordinator of the H2020 project “Materials Design at the Exascale” 09/2015 - present

CORE EXPERIENCE

École Polytechnique Fédérale de Lausanne (Switzerland) 02/2016 - present
Laboratory of Theory and Simulation of Materials
Research Scientist & Software Engineer

- Developed and implemented density-functional perturbation theory (DFPT) for the first-principles determination of interaction parameters of the Hubbard-corrected DFT approach. Applied the novel method for modelling of structural, electronic, and magnetic properties of transition-metal compounds.
Added benefit: Thanks to the new approach which I developed, calculations of Hubbard parameters can be performed in an automatic manner. Quantum simulations are speed-up by a factor of 2-5, and the code is made user-friendly and open-source.

Time for timely feedback (Zoom quiz)



- Please be patient while I administer this (very short!) quiz via Zoom.
- Any additional comments, suggestions or descriptions of technical problems you may have experienced, please write me directly at: Stephen.fischer@epfl.ch
- Now, to the Q&A...

Happy Easter, everyone!

- ✓ Company presentations, career counseling, Industry RoundTables & future workshops: sign up for our **Memento!**
- ✓ *A copy of this presentation in .pdf will be posted on **Forum website** by next week!*
- ✓ *“CV Group Correction” sessions, week of 20-24 April 2020* (only for those present today: details to follow); check <https://www.forum-epfl.ch/en/>

Thank you for participating...

in partnership with  **FORUM**EPFL

Why did the Easter egg hide?



He was a little chicken!

Stay safe, enjoy your
“Stay-cation,” and eat
mega doses of chocolate!