

# Sébastien Arnold

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## Education

**University of Southern California** **August 2014 - Present**

**BS. Computer Science & BA. Mathematics**

Continuation of my Bachelor's degree. CS honor society member, Society of Women in Engineering member, 4 Graduate classes. Objective: graduation in 3 years.

**ETH Zürich** **September 2011 - August 2013**

**BS. Computer Science**

German-based instruction, advanced class in parallel and distributed computing, machine learning project with Yuxin Chen, PhD student of Prof. Andreas Krause.

**Stanford University** **June 2011 - August 2011**

**High-School Summer Semester**

Opportunity for high-school students to take undergraduate classes.

**Gymnase Auguste-Piccard** **August 2008 - August 2011**

**Maturité Fédérale**

High-school degree, with an emphasis on Mathematics and Physics.

## Research Experience

**Brain-Body Dynamics Lab - USC** **July 2016 - Present**

**Undergraduate Researcher - Advisor: Prof. Francisco Valero-Cuevas**

Investigating deep reinforcement learning algorithms for simulated, robotic, and cadaveric hand control.

**Simulation and Modelling Lab - USC** **April 2016 - Present**

**Undergraduate Researcher - Advisor: Prof. Chunming Wang**

Investigating second order optimization methods for distributed deep learning.

**Information Science Institute - USC****January 2015 - December 2015****Research Assistant - Advisor: Prof. Greg Ver Steeg**

Research in quantum optimization of Ising models, and quantum machine learning within the group of Prof. Dr. Daniel Lidar.

**Computational Social Science - ETHZ****June 2012 - January 2014****Research Assistant - Advisor: Dr. Stefano Balietti**

Development of sociological experiments with JavaScript and PHP. Project received appraisal from the European Commission and fundings for coming years.

## Industry Experience

**Nervana Systems****August 2015 - August 2016****Algorithm Intern - Advisor: Dr. Arjun Bansal**

Development of distributed deep learning library and project in distributed deep reinforcement learning.

**Schneeberger AG****June 2014 - November 2014****Lead Developer**

Development of a financial management tool for an international usage. Engineering leader in a team of 4.

**Tooski****January 2009 - Present****Founder**

Development of the leading French-speaking skiing website, and its magazine Angulation.

## Writings

**A Greedy Algorithm to Cluster Specialists** *S. Arnold*, Technical Report, 2016, *Arxiv Preprint*

**Comparing Efficiency of TRPO and CEM** *S. Arnold & E. Chu*, Poster Presentation, 2016, *SoCal ML Symposium*

## Awards

- **David Wiesen Scholarship**: 2016
- **USC Summer Undergraduate Research Fellowship**: 2016
- **Microsoft Tuition Scholarship**: Finalist, 2016
- **USC Academic Achievement Award**: 2015, 2016

- **USC Provost Research Fellowship:** 2015, 2016
- **USC Dean's List:** 2014, 2015, 2016

## Languages

- **Bilingual:** French, Italian
- **Proficient:** English, German
- **Basic:** Spanish

## Interests

- **Ski:** Throughout my highschool and part of my university studies, I was lucky to race across the Alps on the FIS circuit with the best regional Swiss skiers. This longstanding passion spawned Tooski, and I was once ranked among the best 2'000 racers worldwide.
- **Mathematics:** I am generally interested in mathematics, and more specifically in optimization and stochastic models. I like to apply them to all kinds of problems, especially the ones related to artificial intelligence.
- **Computing:** I have been programming since the age of 14, and have studied different computational hardwares such as GPUs, D-Wave, and HPC Clusters.