

# Andreas Bloch

## Machine Learning Specialist

Computer Scientist **ETH** Zürich

«My passion is to solve challenging problems through the power of cutting-edge machine learning technologies.»



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## SHORT PROFILE

Originally, I studied business information technology and then worked as a Software Engineer and IT Consultant. My passion for machine learning then motivated me to take a leap of faith and pursue a further bachelor in computer science with focus on machine learning. I recently graduated – so, here I am now, ready and eager to take up my first big job opportunity in the field of machine learning.

## WORK EXPERIENCE

### Associate IT Consultant – Orbium

10/2013 – 05/2014

Zürich & Berlin

Parametrization of the Avaloq Banking Suite (E-Banking, Output Management) for three major banks in Germany. Requirements engineering in close collaboration with the clients.

Technologies: Avaloq, PL/SQL, XML

### Research Assistant – ZHAW

05/2013 – 07/2013

Winterthur

Continuation of bachelor thesis: Implementation of a system for transportation mode detection on mobile devices for SBB and Swisscom. Conduction of trainings on Spring framework for the research assistants of the department.

Technologies: Java (Spring Framework, WEKA Machine Learning Library), Android (Spring Mobile), MySQL

### Web Developer – ZHAW & Press Play

09/2012 – 06/2013

Winterthur

Integration Seminar: Implementation of the entire website for the event and live voting of the Swiss Music Awards of 2013 in a team of four students. Desktop and mobile client via responsive web design. Conduction of web development trainings for the upcoming students of the following year.

Technologies: PHP (Drupal), JavaScript (jQuery), CSS (LESS), HTML

### Junior Software Engineer – Namics

06/2012 – 09/2012

St. Gallen

Internship in software engineering: Integration of a rule-engine into the Swissport Lounge Check-in system. Training of client for the recording of rules into the rule-engine.

Technologies: Java (Spring Framework, Hibernate, OpenRules), MySQL, HTML, JavaScript (jQuery)

### Specialist Consumer Finance – Credit Suisse

05/2008 – 08/2010

Horgen

Customer care for consumer credits in German, French, Italian and English. Opportunity to participate in the testing of new software releases.

## EDUCATION

### B.Sc. Computer Science – ETH Zürich [5.46/6.0]

09/2014 – 09/2019

**Thesis:** Mixed-Curvature Space Representations for Recommender Systems

**Specialization:** Elective courses in machine learning:

- Deep Learning\*
  - Data Mining\*
  - Machine Learning\*
  - Visual Computing
  - Probabilistic Artificial Intelligence\*
  - Learning and Intelligent Systems
  - Building a Robot Judge
- \* = Master-level courses

### B.A.Sc. Business Administration – ZHAW SML [5.65/6.0]

09/2010 – 09/2013

**Thesis:** Battery-Efficient Transportation Mode Detection on Mobile Devices

**Specialization:** Business Information Technology

**Honor Award:** Best graduation in Business Information Technology

## SKILLS

Data Science Machine Learning Deep Learning

Natural Language Processing Data Mining

Recommender Systems Computer Vision

IT Consulting Software Development

## IT SKILLS IN DETAIL

### Python

Pytorch, Tensorflow, Keras, Sklearn, Spacy, Numpy, Pandas, Matplotlib

### Java

Spring, Hibernate, Android, Maven

### C++, C, x86 Assembly

Eigen, OpenCV, OpenMP, MPI, Custom Kernel Modules, IDA, GDB

### Matlab

### MySQL, PostgreSQL, PL/SQL

Avaloq (Certified Professional 2013-2015)

### Amazon Web Services

### Linux, Unix, Windows

### PHP, HTML, CSS & JavaScript

Wordpress, Drupal, NodeJS, jQuery, Angular, WebGL

### Haskell

## PERSONAL PROJECTS

- **Open Source Contribution** of  $\kappa$ -stereographic model to the geometric optimization library geoopt.
- **Machine Learning Blog:** [andbloch.github.io](https://andbloch.github.io)
- **Continuous Learning:** Regularly updating machine learning skills through reading of research papers and attending of meetups and online courses.

## LANGUAGES

English Full Professional Proficiency  
German Native Proficiency (Bilingual)  
Italian Native Proficiency (Bilingual)  
French Full Professional Proficiency  
Portuguese Professional Proficiency

## INTERESTS

Kitesurfing Swimming Barbecuing

Artificial Intelligence Technology

Mathematics Socializing