Till Breuer

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Mathematician. Data Scientist. Software Developer.

Data Scientist at the unbelievable Machine Company with a math diploma from University of Münster and a background in **machine learning**, **software development** and **statistical modelling**.

📖 EDUCATION

10/2004 - 06/2010	**University of Münster** Diploma in Mathematics / Probability Theory ∅ 1.2 Thesis (1.3): **»Zur Rekurrenz von Random Walks«**
10/2001 - 10/2004	**Berufsakademie Mannheim** Diploma in Information Technology (BA) ∅ 1.5 Thesis (1.4): »Entwurf einer Architektur zur Publikation von Unternehmensverzeichnissen im Intranet«
1991 - 2000	**Gymnasium Am Geroweiher, Möchengladbach** Abitur ∅ 1.4

🕐 EXPERIENCE

The unbelievable Machine Company GmbH
Cloud Service Provider and Full Service Provider for Data Solutions

11/2014 - present

Data Scientist

At my current position I have been working on a variety of Data Science projects. These include industry projects as well as e-commerce and media-related projects. Among others I worked on

- Computer Vision: Image recognition using neural networks
- Recommendation: Collaborative filtering, content-based recommendations, statistical and bandit approaches
- Predictive maintenance: Predicting malfunction of manufacturing components and classifying errors
- Performance prediction: Predicting distribution of user participation among different channels
- Prediction of energy consumption
- Various clustering / segmentation tasks

Responsibilities & Achievements

- Leading role in most projects
- Customer communication
- Contributing to the improvement of internal processes
- Introducing best practices for coding
- Speaker at several conferences including the bitkom Big Data Summit

bitcrowd GmbH
Web Development Consultancy

8/2014 - 10/2014

Freelance Software Developer

After Krautreporter was crowdfunded I helped developing the platform as leading backend and Javascript engineer. I was responsible for the technical concepts of the platform as well as for implementing the Rails backend, the AngularJS components and making the components work together. The platform had a tight deadline and launched on time.

Responsibilities & Achievements

- Backend and client-side development
- Choices of technology (web content editor for publishing articles)
- Technical concepts

finn GmbH / openproject
Software Development Consultancy

10/2013 - 8/2014

Software Developer

Finnlabs is a Berlin-based company centered around their product, an open source project collaboration software called OpenProject. I joined the company as a senior software developer.

Responsibilities & Achievements

- Backend development (Ruby on Rails)
- Working in an international team
- Requirements engineering and sprint planning
- Team coordination and leading the Javascript / AngularJS development

Zweitag GmbH
Ruby on Rails Consultancy

6/2010 - 10/2013

Software Developer

As a software engineer I worked on a variety of projects, for example **so-schmeckts.de** or **compeon.de**. Technologies we worked with involved **Rails** as server-side technology as well as **JavaScript** and related frameworks like **AngularJS** on the client-side. Zweitag applies behaviour driven development using **Rspec**, **Capybara** and **Jasmine**. Data visualization were done with **D3.js** among others.

Responsibilities & Achievements

- Backend and client-side development
- Technical concepts
- Customer communication
- Project coordination

Institute of Mathematical Statistics
of the University of Münster

8/2010 - 10/2011

Research assistant

As a research assistant at the institute for probability theory at the University of Münster I was mentor for seminars in probability theory and statistical modelling.Besides I lead the internship for applied statistics with R. I did research in the field of renewal theory exploring structural inheritance properties of Markov renewal processes. Meanwhile I worked as a software developer at Zweitag GmbH (see above).

Fairix
Startup

10/2008 - 3/2010

Software developer, CTO

Fairix is a startup I took part in as a software engineer while I was a student of mathematics. Fairix provided a platform to producers and merchants enabling them to offer products with additional ecological or social value, e.g. fair trade products. In an engineering team of two we developed a marketplace platform with Ruby on Rails. For that purpose I learnt Rails from scratch and I was leading the development in the later course of the project when the platform launched. The startup finally ran out of funds after two years.

Bundesamt für Sicherheit in der Informationstechnik
(BSI)

8/2007 - 9/2007

Research engineer (Pattern recognition)

At my internship at the BSI I worked on research topics about malware classification. The internship lasted two months and together with my mentor I implemented a pattern recognition and a clustering approach to identify and distinguish malware by the kinds of exploits it used. The software had to be extremely performant and of linear complexity and was written in C.

Institute of Mathematical Statistics
of the University of Münster

10/2006 - 3/2008

Tutor in linear algebra / functional analysis

Tutorials and correction of student homework.

🧪 INTERESTS

- Music and playing the guitar
- Machine Learning and artificial intelligence
- Sports
- Data visualization
- Reading
- Studying
- Longboarding
- Code design

💬 REFERENCES

Klaas Bollhöfer, former Lead Data Scientist at the unbelievable Machine Company GmbH (http://www.unbelievable-machine.com)
    was my boss at the unbelievable Machine Company in Berlin.

Christoph Beck, Founder at bitcrowd GmbH (http://bitcrowd.net/#team)
    was my boss during the development of Krautreporter.

Julian Schneider, CEO and Founder at Zweitag GmbH (http://www.zweitag.de/de/team)
    was my boss at Zweitag GmbH in Münster.

Prof. Dr. Gerold Alsmeier (http://wwwmath.uni-muenster.de/statistik/alsmeyer/)
    supervised my diploma thesis at University of Münster.