

Daniel Kirsch

Mathematician. Web. Data. Visualization.

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🐦 @kirel

Machine „dompteur“ with a math diploma from University of Münster and a background in **pattern recognition** and **machine learning**. Creator of **detexify**. I am excited about data products - from the ML up to the UX. I speak many programming languages - preferably functional ones.

📖 EDUCATION

10/2003 - 11/2010

University of Münster

Diploma in Mathematics / Computer Science ø 1.5

Thesis (1.3): »**Detexify: Recognition of hand-drawn LaTeX symbols**« implemented as a **RESTful** webservice written in **Haskell** and **Ruby** using **machine learning** techniques. Samples are stored in **CouchDB**. See <http://detexify.kirelabs.org>

1993 - 2002

Gymnasium Laurentianum Warendorf

Abitur ø 2.0

🕒 EXPERIENCE

Idalab

Agency for Data Science
<http://www.idalab.de>

2/2016 - today

Freelancer

4/2015 - 1/2016

smartB

Energy Management GmbH

8/2014 - 3/2015

Hitfox Group

Incubator building companies and careers

6/2014 - 7/2014

Zweitag GmbH

Ruby on Rails Consultancy

8/2009 - 5/2014

Visualization and Computer Graphics Research Group

of the University of Münster

10/2008 - 3/2009

Databases and Information Systems Group

of the University of Münster

11/2008 - 3/2009

Institute of Mathematical Statistics

of the University of Münster

10/2007 - 10/2008

Data Scientist

Mathematical Modelling, Machine Learning, Artificial Intelligence, Strategy

Mathematician

- Reduction of food waste through **predictive modeling** of **time series** for a german vending machine business with **scikit-learn**
- **Statistical consulting** and predictive modeling for in financial services (dunning processes) with **R**
- Supported development of a **machine learning** API for a Berlin-based parking app startup

Data Analyst & Visualization Expert

- Translation of **business requirements** into suitable technical solutions
- Leading frontend development (**Project Management**, **Node**, **D3**, **Angular**) and building APIs and the data pipeline (**Python**, **Pandas**) for our smart meters and **NILM** results
- Drafting and implementing a DevOps process and best practices with **Ansible**

Data Scientist

- Prototyped a **Big Data** architecture in a **Telco** context
- Supported a new **FinTech** venture by prototyping the backend architecture and implementing the **MVP** with **Rails**

Software Developer

I was involved in a variety of projects ranging from ecommerce sites and auction systems to business intelligence tools. I worked on the **Rails** backend as well as with frontend technologies such as **HamL**, **SASS**, client-side **Javascript**-frameworks and **D3.js** for data visualization. I helped establish **TDD/BDD** as a company best-practice, introduced new technology such as **Angular.js** as a core Zweitag technology and supported and co-created the corporate **mentorship** program besides mentoring student workers and interns.

Student worker: Voreen Volume Rendering Engine

Worked on the medical imaging engine Voreen in **C++** and **OpenGL**.

Student worker: Project Learnr

Built a **RESTful** webservice for managing assets for an E-Learning platform using **Ruby on Rails**.

Tutor in stochastics / probability theory

Tutorials and correction of student homework.

VOLUNTARY EXPERIENCE

DSSG Berlin

12/2014 – present

Founder

We are in the process of founding a new organization promoting **data science for social good**. See <http://dssg-berlin.github.io/> for more details.

Open Knowledge Lab Münster

Code for Germany

2/2014 – 12/2014

Lab Lead

in a local community revolving around **civic tech** and **open data**. See <http://codefor.de/muenster> for more details.

Responsibilities

- Organize local meetups
- Stay in touch with local government and journalists
- Guide the participants towards common goals

Monster on Rails

Speaker

at the local Rails user group with talks on

- Angular.js
- **Functional Javascript**

Open Source

Occasional contributor

See <http://github.com/kirel>.

LG Brillux Münster

10/2011 – 5/2014

Track&Field Manager Young Athletics (Sportwart Nachwuchs)

Responsibilities

- Organisation and supervision of track&field competitions
- Creation and implementation of young athletics nurturing programs
- Uniting coaches of the LG by shaping the mutual vision

TuS Hiltrup 1930 e.V.

8/2006 – 5/2014

Track&field coach

Coaching young athletes between ages 12 to 19 especially in vertical jumps and **pole vault**. Earned several qualifications and final places in the German youth nationals.

FLVW

8/2006

Track&field coaching license (C-Lizenz)

Heinrich-Tellen-Schule

in Warendorf

8/2002 – 6/2003

Community Service

at a school for special education.

INTERESTS

- Data Science for Social Good
- Data visualization
- Machine learning
- FP (Haskell, Clojure, R, Elixir, ...)
- Open data / data-driven journalism
- Behavioral Science
- Lean startup-methods
- Reading technical books
- Longboarding, wakeboarding, kitesurfing
- Pole vaulting

See <http://kirelabs.org> for personal projects.

REFERENCES

Dr. Marco Blumendorf, CTO at smartB (marco.blumendorf@smartb.eu)

was my supervisor at SmartB.

Peter Großkopf, CDO at Hitfox (peter.grosskopf@hitfoxgroup.com)

was my supervisor at Hitfox.

Julian Schneider, CEO and Founder at Zweitag GmbH (julian.schneider@zweitag.de)

was my boss at Zweitag GmbH.

Prof. Dr. Xiaoyi Jiang (<http://cvpr.uni-muenster.de/organisation/jiang.html>)

supervised my diploma thesis at University of Münster.