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 - preferrably functional ones.

📖 EDUCATION

10/2003 - 11/2010	**University of Münster** Diploma in Mathematics / Computer Science ∅ 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 ∅ 2.0

🕐 EXPERIENCE

Idalab
Agency for Data Science
http://www.idalab.de

2/2016 - today

Data Scientist
Mathematical Modelling, Machine Learning, Artificial Intelligence, Optimization
in a wide range of projects using Python, Pandas, scikit-learn, keras, R and the tidyverse, caret, Shiny, Docker, Elasticsearch, ansible, AWS (whatever is the right tool for the job).

Freelancer

4/2015 - 1/2016

Mathematician
- Reduction of food waste through predictive modeling of time series fo 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

smartB
Energy Management GmbH

8/2014 – 3/2015

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

Hitfox Group
Incubator building companies and careers

6/2014 - 7/2014

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

Zweitag GmbH
Ruby on Rails Consultancy

8/2009 - 5/2014

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, intoduced 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.

Visualization and Computer Graphics Research Group
of the University of Münster

10/2008 - 3/2009

Student worker: Voreen Volume Rendering Engine
Worked on the medical imaging engine Voreen in C++ and OpenGL.

Databases and Information Systems Group
of the University of Münster

11/2008 - 3/2009

Student worker: Project Learnr
Built a RESTful webservice for managing assets for an E-Learning platform using Ruby on Rails.

Institute of Mathematical Statistics
of the University of Münster

10/2007 - 10/2008

Tutor in stochastics / probability theory
Tutorials and correction of student homework.

👥 VOLUNTARY EXPERIENCE

DSSG Berlin 12/2014 – present	Founder Data Science for Social Good Berlin is a pro bono intermediary for data science. We help nonprofits move into the data age by running workshops and hackathons to help solve their data problems thus connecting them to industry data scientists. See http://dssg-berlin.org/ and https://blog.dssg-berlin.org/ 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
Meetups and Conferences	Speaker • EKHN Symposium 2017: Data for Good Workshop • labtogether 2016: Panelist on effective altruism and workshop on data for good • data2day 2016: Natural language processing with recurrent neural networks • Pydata 2016: Functional Programming in Python • Strange Group Berlin: The Grammar of Graphics and R Metaprogramming • Strange Group Berlin: Functional Javascript • Monster on Rails: Angular.js
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 superviser at SmartB.

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