Lukas **Pfannschmidt**

DATA SCIENTIST · SOFTWARE ENGINEER

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Skills

Machine Learning	Feature Selection and Representation, Data Science, Model Selection and Design
Research	Scientific Writing and Presentation
Development	Software and algorithm design, parallel and efficient computing, Databases, Python, JAVA, Julia, C, LaTeX
DevOps	Docker, Kubernetes, Travis, Git, GitHub Actions, Linux
Languages	German (native), English (fluent)

Projects

Feature Relevance Intervals - Python application

PhD PROJECT

- Goal: parallel and fast implementation of theoretical feature selection algorithm
- Developed with usability in mind by following *scikit-learn* API convention and extendable via modules
- Deployed via *GitHub* and *PyPi* package repository

Price Prediction in Dynamic Online Game Economy using Deep Learning

SIDE PROJECT

- Goal: predict prices of unseen in-game items based on historical data of similar ones
- Efficient data scraping of marketplace streaming data and compressed database storage
- Knowledge representation of in-game item features
- Prediction of unseen item combinations using deep learning with much higher accuracy than alternatives

Endoscope Management Terminal - Professional Health App

TEAM COMPETITION - TECHNICAL LEAD - WINNING TEAM

- Goal: Android App for medical professionals handling endoscopes in a clinical setting
- Developed in competitive setting with the endoscope manufacturer (*Miele*) as client: focus on agile development with changing requirements

Parallel K-Means Clustering - High Throughput Library

STUDY PROJECT

- Goal: highly parallel and efficient implementation running on CPUs and GPUs
- C Kernel for GPU computing based on *OpenCL*
- Achieves linear performance scaling with number of compute units

Adverse Drug Reactions Warner - User Health App

STUDY PROJECT

- Goal: end user facing Android application warning against possible harmful interactions between medication
- Collaboration with *Franziskus* hospital Bielefeld
- Database backed query and visualization modules

Education

PhD in Machine Learning
Bielefeld, Germany
Vancouver, Canada

BIELEFELD UNIVERSITY, CITEC, SFU VANCOUVER
2016 - planned 2020

- Thesis: Relevance Learning for Redundant Features
- Member of *Prof. Hammer's* machine learning group
- Research stay at SFU Vancouver in *Prof. Ester's* datamining group

B. Sc. & M. Sc. in Bioinformatics and Genome Research
Bielefeld, Germany

BIELEFELD UNIVERSITY
2011 - 2016

- Master thesis: Interactive feature selection for biomedical data analysis
- Bachelor thesis: Survey of the cuckoo-RNA family beyond the Alphaproteobacteria