Jonas Fassbender

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Synopsis

Software Engineer with a background in Data Science and Machine Learning, focused on predicting with certainty. Well versed in parallel and distributed computing techniques and patterns. Interested in cloud computing and DevOps for reducing the overhead and hardships of Ops as much as possible. Searching for the most obvious and simplest solution.

Professional Experience

Jan 2020 – now: Self-employed Software Engineer. Main projects:

carpolice.de. Insurtech platform for car salespersons, enabling them to sell car insurance products. Helped 300+ car salespersons sell 2k insurance policies since launch in April 2021. RESTful API-first microservice application with a web client as frontend. Sole maintainer of 70k+ LoC.

German Sport University Cologne: Application for teachers to conveniently generate rich semester plans applying Inquiry-based Learning. Helped the initiators of this project by creating a technical specification of the application and its domain. Currently in the stage of raising funds for the development of the application.

Improving the consumer loan approval process of a German bank using Machine Learning. Applied a Conformal Prediction based classifier to pre-reject loan requests likely to be declined, saving the fee of querying a credit bureau. Able to pre-reject 17% of all rejected requests while maintaining an accuracy of 98%. Currently not applied in production due to a policy shift of the bank in wake of the COVID-19 pandemic.

Sep 2018 – Jul 2019: Working Student, RLE International. In a team with other students, tried finding ways for RLE International to adopt Machine Learning as an emerging technology and create ML-powered products and solutions for its customers.

Jul 2015 – Aug 2016: Small Business System Administrator, Lieb EDV Beratung. Set up and maintained backup systems and performed general administration tasks on Windows servers and domains for several small businesses. Established new office locations for customers including the setup of hardware, phones and printers and the local network. Fixed broken hardware and virus infected computers. Helped securing networks against ransomware attacks.

Open Source Contributions

Maintainer of various utility crates part of the Rust ecosystem: Libraries containing solutions concerned with (i) meta-programming based abstractions (procedural and declarative macros), (ii) (de)serialization, (iii) the actix-web framework and (iv) solving utility tasks such as parsing an environment file or logging requests across multiple services. 15k+ downloads.

Flutter: Contributed to the `PaginatedDataTable` widget from Flutter's Material Design library.

SpiNNaker: Contributed bug fixes and API enhancements to the Graph and Common Python Frontends of the SpiNNaker software stack.

Education

Sep 2019 - Sep 2020: MSc High Performance Computing with Data Science, University of Edinburgh. Thesis: Deep Learning on SpiNNaker

Oct 2016 - Aug 2019: BSc Computer Science, Technical University of Cologne. Thesis: Approximating the Optimal Threshold for an Abstaining Classifier based on a Reward Function with Regression

Technologies

Programming languages	Rust, Dart, Python, JavaScript, Julia, Bash, C, Go, Fortran
Cloud Computing	Kubernetes, Docker, Google Cloud Platform, Elastic Cloud on Kubernetes, ROOK/Ceph, Firebase
Distributed and parallel programming	MPI, OpenMP, POSIX Threads, RabbitMQ, Apache Kafka, tokio-rs, rayon-rs
Others	Flutter, HTML+CSS, OpenID Connect, Keycloak, Git, LaTeX, OpenSUSE/Linux, SQL, scikit-learn, Keras, Tensorflow, numpy, pandas, Matplotlib