

Jonas Hübötter

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EXPERIENCE

- **Citadel Securities (Market Maker)** London, United Kingdom
Quantitative Researcher (Internship) July 2022 - September 2022
 - **Time-series prediction:** and monetization with Guillaume Basse and Sören Künzel. Received a full-time return offer.
- **Uncountable (R&D Platform)** Munich, Germany
Machine Learning Engineer (Part-time) April 2020 - July 2021
 - **Work with R&D teams:** to streamline their data and accelerate development using Bayesian optimization
 - **Intelligent Suggestion of Formulations:** Extended existing features to reflect linear constraints like cost and stoichiometric ratios when identifying promising formulations.
 - **Outlier Detection:** Developed an end-to-end feature set to detect outliers and bimodal distributions.
- **Liefery (Same-Day Delivery)** Berlin/Munich, Germany
Software Engineer (Internship, then Part-time) May 2018 - Mar 2020
 - **Leading the team to adopt an automated continuous delivery workflow:** increasing quality and quantity of production deployments with less downtime
 - **Scalability:** Worked on route planning algorithms and data organization supporting timely delivery of hundreds of thousands of shipments a month.

EDUCATION

- **ETH Zurich** Zurich, Switzerland
M.Sc. Computer Science 2021 - 2023
Thesis on Information-based Algorithms for Transductive Learning with applications to (safe) Bayesian optimization.
Courses: Guarantees for Machine Learning, Algorithms Lab, Randomized Algorithms and Probabilistic Methods
Teaching Assistant: Probabilistic Artificial Intelligence (graduate), Advanced Graph Algorithms and Optimization (graduate), Algorithms & Probability (undergraduate)
- **Technical University Munich** Munich, Germany
B.Sc. Computer Science (passed with distinction) 2018 - 2021
Thesis on Algorithms for Smoothed Online Convex Optimization, useful for resource allocation, contextual sequence prediction, portfolio management, and object tracking.
Courses: Algorithms & Data Structures, Artificial Intelligence, Quantitative Verification, Modeling and Simulation, Operations Research
Teaching Assistant: Functional Programming and Verification, Discrete Probability Theory, Theory of Computation (all undergraduate)

KEY PROJECTS

- **Lecture notes on Probabilistic Artificial Intelligence (Writing, Teaching):** Writing a set of lecture notes with Andreas Krause. Some of the covered topics are Bayesian Learning, Gaussian Processes, Approximate Inference, Bayesian Deep Learning, Bayesian optimization, Active Learning, Markov Decision Processes, and Reinforcement Learning. ('22 - '23)
- **Widely Used Open-Source Libraries:** I created multiple NPM and Ruby libraries that collectively have been downloaded for well over a million times. (since '16)
- **Type Inference of TypeScript:** I contributed numerous improvements to TypeScript's type inference algorithm, which satisfied the strong requirements for external contributions. These included stronger type inference, stricter type checks, and more accurate error messages. (Nov '20 - Feb '21)
- **Serverless media streaming app (Web Development, Data Organization):** I created an app that integrates with cloud providers such as OneDrive or FTP servers to stream media. The media is enriched with metadata from other third-parties. Technology: TypeScript, React, Redux, on-device storage, REST APIs. ('19)
- **Static site generated from CMS (Web Development, Automization):** I built a company website that is static (so lightning fast!), but dynamically generated from a CMS. This might not sound like a big achievement, but I build it such that it incurs *zero* monthly maintenance costs. Technology: TypeScript, Gatsby (hosted on GitHub Pages with GitHub Actions), Strapi (hosted on Heroku), GraphQL. (Mar '21)

SKILLS SUMMARY

Key skills: *designing* algorithms and tech stacks, *understanding* and efficiently *organizing* data, *automatization*, working with significant *legacy code*.

I like to challenge myself/be challenged, so the following are merely an excerpt of the technologies/skills that I have used and acquired along the way.

- **Languages:** Python, TypeScript, Rust, C++, Java, Ruby, Haskell
- **Frameworks:** PyTorch, Numpy, SciKit, Pandas, React, Redux, Gatsby, NodeJS, Rails, Flask
- **Tools:** Docker, Git, GitHub Actions, PostgreSQL, MongoDB
- **Soft Skills:** Teaching, Writing, Leadership, Time Management, Public Speaking

HONORS

- Awarded undergraduate scholarship by the German Academic Scholarship Foundation (Studienstiftung) - Feb 2019
- Awarded graduate scholarship by the German Academic Scholarship Foundation (Studienstiftung) - Feb 2021