Daniel Fridljand

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Summary

I am a driven data scientist with a strong academic background in mathematics, statistics, and bioinformatics. My passion for **machine learning**, software development, and coding has led me to work on projects across diverse domains, including public health, genetics, and oncology. With three years of scientific software development experience and a first-author publication in a high-impact journal, I'm committed to leveraging computational skills to solve real-world challenges.

Software Development Experience

Software Consultant *Munich, Germany*
TNG Technology Consulting *Dec 2024 – present*

- Modernization and further development of a supply chain management application in an international development team
- Service for requesting quotation, bidding, displaying and confirming delivery orders
- Agile development with a two-week sprint cycle, continuous integration, and regular production releases within the sprint
- Setup of CI pipelines (Jenkins, SonarQube, Gradle)
- Enhancement of test automation capabilities
- Full-stack development with React, TypeScript, Java 8/17, JBoss, Oracle DB, Gradle, JUnit, Docker, Podman, Jenkins, SonarQube

Data Science Experience

Research Data Analyst *Basel, Switzerland*
ETH Zürich *Feb 2024 – Sept 2024*

- Developed statistical methods for estimating mutational patterns in the lab of Niko Beerenwinkel
- Analyzed single-cell, whole-genome DNA sequencing data from the Tumor Profiler Study, a large-scale clinical study involving multiple Swiss research institutions, contributing to key insights for melanoma cancer

Research Data Analyst *Palo Alto, USA*
Stanford University *July 2023 – Dec 2023*

- Analyzed the role of air pollution for health inequalities in the US, under Pascal Geldsetzer's guidance
- Devised and implemented the statistical analysis in **R**, synthesized findings from 150 pertinent publications, wrote the initial manuscript, and drove the manuscript from conceptualization to successful publication
- Executed major revisions of the manuscript and conducted new analyses within a strict 2-month deadline

Research Data Analyst *Heidelberg, Germany*
European Molecular Biology Laboratory *Oct 2021 – May 2022*

- Developed and implemented a novel statistical method in **R**, C++ under the guidance of Wolfgang Huber and Nikos Ignatiadis to identify outliers in large-scale data sets
- Presented research findings at seven scientific events, including a seminar talk at Yale University and University of North Carolina and a competitively selected oral contribution at DAGStat 2022, attended by 100 scholars
- Conducted the peer reviews for manuscripts at Bioinformatics Advances and Cell Biology

Research Data Analyst *Heidelberg, Germany*
Heidelberg Institute of Global Health *Oct 2020 – Sept 2021*

- Analyzed the role of air pollution for health inequalities in the US, under Pascal Geldsetzer's guidance

Education

University of Heidelberg *Heidelberg, Germany*
M.Sc. in Mathematics *Oct 2020 – May 2023*
- Grade: 1.0 (full marks)
- Selected coursework: SQL, statistics for **machine learning**
- Awards: Gerhard C. Starck Foundation Stipend, Baden-Württemberg Stipend

Yale University *New Haven, USA*
Exchange Student in Applied Mathematics *Aug 2022 – May 2023*
- Grade: Honors (full marks)
- Selected coursework: Theory and Application of Deep Learning, Topological Methods in **Machine Learning**
- Award: German Academic Exchange Service (DAAD) Stipend

University of Heidelberg *Heidelberg, Germany*
B.Sc. in Mathematics *Oct 2017 – Sept 2020*
- Grade: 1.4
- Award: Gerhard C. Starck Foundation Stipend

Hebrew University of Jerusalem *Jerusalem, Israel*
Exchange Student in Mathematics *Sept 2019 – Mar 2020*
- Awards: PROMOS Stipend (DAAD), Stipend of the Hebrew University of Jerusalem

Teaching Experience

Crash Course Tutor *Germany*
Studybees GmbH *Apr 2018 – Aug 2019*
- Mentored over 150 students at the University of Mannheim across 10 courses, preparing them for exams

Freelance Writer *Germany*
Springer Nature *Aug 2019 – Aug 2019*
- Developed two mathematical exams focused on statistical applications in laboratory setting

Publications

Disparities in air pollution attributable mortality in the US population by race, ethnicity and sociodemographic factors July 2024
Pascal Geldsetzer, ***Daniel Fridljand***, Mathew V. Kiang, Eran Bendavid, Sam Heft-Neal, Marshall Burke, & others
www.nature.com/articles/s41591-024-03124-1 (Nature Medicine)

Skills

Computer Skills: R (5 years): tidyverse, ggplot, caret, Rcpp; **Python** (2 years): pandas, numpy, pytorch; C++ (1 year)

Mathematical Skills: Selective Inference, Graphical Modelling, **Machine Learning**, Random Forest

Languages: English (professional), German (native), Russian (native)