STEFAN SU

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I am a Master's graduate in Informatics with a background in Chemical Engineering specialized in applied Machine Learning for chemical and clinical research which has helped me become seasoned in methodological thinking and quantitative evaluation methods. In the meantime, I've totalled 2 years of industry experience contributing to large object-oriented codebases in Java/Kotlin and prototyping frontend applications in JavaScript. I enjoy being involved in both engineering and product decision making processes and working within inclusive teams together with people from different disciplines and backgrounds.

TECH SKILLS	Java, Kotlin, Python, JavaScript, C, Git, UNIX shell, Docker
HUMANS SKILLS	Team alignment, Scrum, Design sprint, User interviewing, Retrospective moderation
INTERESTS	Yoga, Monthly playlists (since 08/2018), Hiking, Home-cooking regional cuisines

EDUCATION

Technical University of Munich   10/2012 – 11/2021

· Graduated with **M.Sc.** Computer Science (2018 – 2021), focus areas: Human-computer interaction, Applied Machine/Deep learning (Chemistry, Medicine), Software engineering across interdisciplinary teams.

· Graduated with **B.Sc.** Computer Science (2015 – 2018) and **B.Sc.** Chemical Engineering (2012 – 2015).

PROJECTS

CellPhaser Project   03/2021 – 10/2021
Master's Thesis Research   *Munich, Germany*

· Implemented and analyzed an application for clinical researchers to refine their medical image annotation pipeline, allowing them to interactively label blood cell images with the help of an AI assistant.

· Built and deployed a full-stack web application which records user interactions and released a user study which reached *84 participants from over 14 disciplines* over less than a month.

· Analyzed user interaction dataset, proved efficacy of an estimate with noisy, crowd-sourced annotations compared to an individual's submission with an *IoU-score increase of up to 153 %*.

· Technologies: Vue.js · Python Flask · PostgreSQL · SQLite · Docker · Python (Numpy, Pandas, Matplotlib, Seaborn)

Data Analytics and Machine Learning Group   03/2020 – 07/2020
Machine Learning Lab   *Munich, Germany*

· Designed a neural network architecture with $E(3)$-equivariant convolutions for the regression on molecular properties of small organic 3D molecules from the QM9 dataset.

· Implemented $E(3)$-convolutions on 3D electronic density maps and proved an increased MAE convergence rate through numerical experiments (baseline: vanilla 3D convolution). *Reduced validation MAE by 33 %* despite having fewer parameters in our architecture, realized higher memory-efficiency and a *time-per-epoch decrease by 25 %*.

· Technologies: Python (Numpy, Pytorch, Matplotlib)

Chair for Connected Mobility   03/2018 – 07/2018
Bachelor's Thesis Research   *Munich, Germany*

· Analyzed longitudinal YouTube streaming datasets with around $500\,k$ entries each obtained from over 100 dual-stacked probes around the globe that perform active measurements towards YouTube media servers.

· Joined video streaming performance metrics together with content delivery path information to gain insights into performance and content caching discrepancies between IPv4 and IPv6.

· Proved deteriorated absolute latency but higher relative content caching benefits when streaming over IPv6.

· Technologies: Python (Numpy, Pandas, Matplotlib) · SQLite

WORK EXPERIENCE

Digital Product School   09/2019 – 11/2019
Software Engineering Intern   *Munich, Germany*

· Delivered a new user-centric product ecosystem for BMW in a cross-functional Scrum team.

· Prototyped a web application for low fidelity user testing, set up developer infrastructure and deployed proof-of-concept backend server instance and CD pipeline connected to a NoSQL cloud database.

· Technologies: React.js · Python Flask · Google App Engine · Cloud Firestore

JetBrains GmbH   03/2019 – 07/2019
Software Engineering Intern (AppCode Team)   *Munich, Germany*

· Contributed to global macOS/iOS developer community feature requests, spread test coverage on the IntelliJ Platform and implemented 3rd-most community requested feature for Objective-C development support.

· Technologies: Java · Kotlin · Objective-C

Soley GmbH   06/2016 – 05/2017
Part-time Software Engineer   *Munich, Germany*

· Developed and released the code auto-completion feature of the Soley Studio core product to support *over 50 customers* with their development tasks.

· Implemented additional unit test layer that mocks user interactions and significantly reduced manual testing workload of the QA Engineer.

· Technologies: C# · .NET · ANTLR