Reza Rezvan

Computer Science & Engineering Major

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About

Technical Skills: C/C++, Python, Jax, Numpy, Pandas, Tensorflow, Pytorch, Linux, Git, Docker.
Languages: Fluent in English, Swedish and Farsi; Conversational Proficiency in French.
Interests: Deep learning, Machine learning, Computational learning theory, Neural Networks.

Education

BSc/MSc in Computer Science & Engineering **Chalmers University of Technology** (September 2021- June 2024)

- GPA: 4.25/5
- Core Studies: Linear Algebra, Calculus, Computer communication, Mathematical statistics and discrete mathematics, Data structures and algorithms, Principles of Concurrent Programming and Computer system engineering.

Work Experience

Huawei
Software Engineer Intern, Baseband Laboratory Team Gothenburg (June 2023 - August 2023)

- Played a pivotal role in a project aimed at **optimizing and parallelizing C** code through **static code analysis**, using **C++**, **LLVM**, and **Clang** tools. This effort aimed to enhance code comprehensibility prior to production and facilitate potential improvements.

Huawei
Software Engineer Intern, 5G Wireless & Communications Research Team Gothenburg (June 2022 - November 2022)

- Actively contributed to the preparation and execution of the annual Huawei hackathon, engaging over **100 participants** to solve **real-world 5G and 6G problems**. Responsibilities included **peer-reviewing** the problems, providing continuous feedback, and developing solutions in **C/C++**.
- Collaborated with the team to build a **website** for **registration and submission** for the hackathon, employing **Python and SQL**. Using these tools we also created **internal data visualization and analytics to use for future work**. This analysis offered valuable insights and statistics for **future hackathon planning** and technological development.

Competitions & Personal Projects

rezvan from scratch | ***Python*** | ***Jax*** | ***Numpy*** | ***Tensorflow*** | ***PyTorch,*** | ***Equinox,*** | ***Optax***

- Developed a comprehensive repository that encompasses the implementation of various AI, Machine Learning, and Deep Learning models, including but not limited to **CNNs**, **GANs**, **GPTs**, **RNNs**, **Backpropagation**, and **Transformers**.
- Diligently studied and translated a significant number of **research papers** to **understand**, **replicate**, and **enhance model performance**.

LAMS library | ***C*** | ***Rust*** | ***Linear Algebra*** | ***Probability & Statistics***

- Wrote an entire **L**inear **A**lgebra and **M**ultivariate **S**tatistics library; Has all necessary operations and functions for vectors, matrices, tensors, and distributions.
- Required me to deepen my knowledge about the math used for A.I and neural networks.

Compiler | ***Haskell*** | ***Computer architecture***

- Consists of a **parser, type checker, and all other necessary components for a compiler**, all written in **Haskell**. Compiles small C-like programs to MIPS assembly.
- Writing this compiler required me to deepen my **computer architecture skills and low-level programming knowledge**.

Open source contributions

- Contributor to open-source projects such as tinygrad/tinygrad, ggerganov/ggml, and various smaller AI/ML repositories, thereby refining my skills and contributing to the broader developer community.