# Jackson Harmon

**Machine Learning Scientist**

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## Profile

I'm a master's student studying at the University of Tübingen, interested in developing the next generation of machine learning models. My research focuses on understanding continual learning and how post-training processes affect pretrained knowledge in large language models.

## Education

**University of Tübingen** — Tübingen, Germany
*Master of Science in Machine Learning* — *2023 – Present*

**Georgia Institute of Technology** — Atlanta, GA
*Bachelor of Science in Computer Science, Highest Honors* — *2017 – 2021*

- Specializations: Machine Learning and Theory

**Ludwig Maximilian University of Munich** — Munich, Germany
*Study Abroad - Informatik* — *2019 – 2020*

**Spartanburg High School** — Spartanburg, SC
*High School Diploma, Top 5 of Class* — *2014 – 2017*

## Research & Publications

**Mapping Post-Training Forgetting in Language Models at Scale** — 2025

- Research quantifying how post-training alters pretrained knowledge in LMs through sample-wise forgetting metrics
- Demonstrated that domain-continual pretraining induces moderate forgetting
- Showed RL/SFT yields moderate-to-large backward transfer on math and logic tasks
- Found that model merging doesn't reliably mitigate forgetting
- Project website: post-forget.github.io

## Experience

**Software Engineer** — 2021 – 2023
*NCR Corporation* — *Atlanta, GA*

- Code-owner of Java and Go microservices deployed across companies worldwide
- Led inter-team and customer-facing weekly meetings to coordinate feature development
- Implemented scalable production backend services

**Machine Learning Intern** — 2018
*Hawque* — *Atlanta, GA (Remote)*

- Developed a facial recognition system with a remote international team
- Implemented user-item collaborative filtering to match users and providers based on preferences and history
- Presented and demonstrated results to stakeholders

**Engineering Intern** — 2016
*Perceptive Solutions* — *Greenville, SC*

- Developed a framework for modeling interactions between various magnets
- Wrote a data extrapolation and visualization program compatible with the modeling framework

## Selected Projects

**ML Models & Algorithms Implementation** | *Python, NumPy, PyTorch* 2024

- On-going collection of machine learning models and algorithms implemented from scratch for learning
- Includes neural networks, optimization algorithms, and probabilistic models

**Physics-Informed Machine Learning** | *Python, PyTorch* 2024

- Course project exploring physics-informed neural networks (PINNs)
- Applied PINNs to solving differential equations with physical constraints

**Scaling Laws** | *Python, PyTorch, Weights and Biases* 2024

- Research project predicting scaling laws for open weight language models, investigating Kaplan and Chinchilla scaling law behaviors and their implications for model training efficiency

**Photo/Video Blemish Remover** | *Python, TensorFlow, OpenCV* 2018

- Developed facial recognition and blemish detection tool using TensorFlow and OpenCV
- Deployed as photo filter application

**Reconfigurable Computer** | *FPGA, Hardware Design* 2014

- FPGA-based reconfigurable computer design, featured on Upverter Blog
- Open-source hardware project with multiple forks

**HarmonsOS - Hobby Operating System** | *x86 Assembly, C* 2013

- 32-bit operating system with bootloader, command line, and hard drive support
- Implemented memory management, file system, and interrupt handling from scratch

## Technical Skills

**Languages**: Python, C++, Java, Go, CUDA, Bash, x86 Assembly, SQL, JavaScript
**ML/AI Frameworks**: PyTorch, LightEval, Hugging Face, Mergekit, TensorFlow, NumPy, scikit-learn
**Tools & Platforms**: Git, SLURM, Emacs, Weights & Biases, ROS2, Docker, Kubernetes, Linux, AWS, LaTeX
**Other Skills**: German (B2 level)