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*

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

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

- 16-bit to 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, Emacs, Weights & Biases, Docker, Kubernetes, Linux, AWS, LaTeX
Other Skills: German (B2 level)