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 Atlanta, GA

Georgia Institute of Technology
Bachelor of Science in Computer Science, Highest Honors

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• Specializations: Machine Learning and Theory

2017 - 2021

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
• Code-owner of Java and Go microservices deployed across companies worldwide

Atlanta, GA

- 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

• 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, ROS2, Docker, Kubernetes, Linux, AWS, LaTeX

Other Skills: German (B2 level)