Shangdian (King) Han

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Personal Statement

- Full-stack research engineer.
- Specializes in software engineering, with 5+ years of experience in collaborating with ML researchers to turn research into products.
- At Microsoft Research, I prototyped the new Office AI for Excel.

Skills

Python, JavaScript, TypeScript, CUDA, Go, Rust, C, C++, Java, C#, AWS (EC2, Lambda, RDS, S3), GCP, Azure, PyTorch, Docker, Kubernetes, Spark, Airflow, React, Next.js, Tailwind CSS, Django, MySQL, MongoDB

Experience

Research Engineer Mar 2023 — *present*

Sky Computing

- Spearheaded the implementation of LiveCodeBench (100+ GitHub Stars), a live benchmark for code LLMs, ensuring real-time performance evaluation while preventing data contamination.
- Evaluated LLMs on a wide range of tasks, including code generation, repair, execution, optimization, and test generation, revealing possible data contamination in new models (ICML 2024).

Research Engineer Jan 2023 — Dec 2023

UC Berkeley Electrical Engineering & Computer Sciences

- Led a team of 5 researchers to develop an ML service for circuit design on GCP and a reinforcement-learning library (GitHub) for circuit optimization using OpenAI Gym and Ray.
- Enabled ML researchers to design optimal circuits without any prior knowledge of circuit design, reducing the design time from 1 week to 1 day.

Software Engineer Intern Sep 2022 — Dec 2022

Huawei

- Designed, implemented, and validated a new service for frequency management using C/C++, enabling cellular networks to support the new 5G standard.
- Optimized a deployed service using C/C++, reducing its runtime complexity from exponential to polynomial.

Research Engineer Intern May 2022 — Aug 2022

Tsinghua University

- Built an Airflow-like service for data processing and analysis using Django, enabling data scientists to perform 10+ data pipelines, including association rule learning, dynamic time warping, etc.
- Trained, validated, and tested an object detection model for NASA satellite images using PyTorch CNNs, validating the feasibility of a new product.

Research Fellow Sep 2021 — May 2022

Microsoft Research

- Prototyped the new Office AI for Excel using TypeScript, C#, and TensorFlow, enabling users to perform 10+ AI tasks. Shipped to the Excel product team.
- Improved a deployed ML classification model (LSTM + CRF), increasing the F1 score from 72 to 77.

Education

University of California, Berkeley Berkeley, CA

B.A. Honors Computer Science & Mathematics Aug 2018 — May 2024

- Tech GPA: 4.0 | GPA: 3.92
- **Coursework**: AI, ML, Probability, Linear Algebra, Algorithms, Optimization, Compilers, Computer Security