Shangdian (King) Han

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🎯 Personal Statement

- Full-stack research engineer.
- Specialized 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

- **Languages**: Python, JavaScript, TypeScript, CUDA, Go, Rust, C, C++, Java, C#, HTML, CSS, SQL, OCaml
- **Technologies**: PyTorch, Kubernetes, Spark, Airflow, React, Next.js, Tailwind, Django, GCP, AWS, Azure

🔭 Experience

Research Engineer   Mar 2023 — *present*
Sky Computing

- Spearheaded the implementation of a "live" benchmark for code LLMs (Large Language Models), 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.

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 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.

Research Engineer   May 2022 — Aug 2022
Tsinghua University

- Built a service for data processing and analysis (like Airflow) 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, LinAlg, Algorithms, Optimization, Compilers, Computer Security