

# Shangdian (King) Han

✉ kingh0730@gmail.com · 🌐 kinghan.info · 📞 kingh0730 · 📠 kingh0730

## Personal Statement

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

## Education

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**University of California, Berkeley**

Berkeley, CA

B.A. Honors Computer Science & Mathematics

May 2024

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

## Experience

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**UC Berkeley Electrical Engineering & Computer Sciences**

Jan 2023 - Dec 2023

Researcher

- 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.

**Huawei**

Sep 2022 - Dec 2022

Software Engineer Intern

- 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.

**Tsinghua University**

May 2022 - Aug 2022

Research Engineer

- Built a service for data processing and analysis using Django, enabling data scientists on the team 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.

**Microsoft Research**

Sep 2021 – May 2022

Research Fellow

- 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) using TensorFlow, increasing its F1 score from 72 to 77.

## Skills

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- Python, PyTorch, JS/TS, React/Next.js, Svelte, Rust, C/C++, Go, Java/C#, CUDA, GCP, Linux, SQL, NoSQL