

# SHANGDIAN (KING) HAN

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## Personal Statement

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- 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

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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

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### 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

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### 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