Kangyu Feng

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Education

University of Illinois Urbana-Champaign Aug. 2024 – Dec. 2025
Master of Computer Science: Siebel School of Computing and Data Science *GPA: 4.00*
- Research/Teaching Assistant: Fall 2024 | Spring 2025 | Fall 2025
- **Advisor**: Prof. Mariana Silva

University of Illinois Urbana-Champaign Aug. 2020 – May 2024
Bachelor of Science: Computer Science in Grainger Engineering *GPA: 3.98*

Experience

Software Developer Intern May 2025 – Aug. 2025
PrairieLearn, Inc. *Champaign, IL*
- Engineered the image capture element and its backend API to enable ∼**1 ms** image submissions for **180k+** students during high-concurrency exams, reducing manual grading turnaround from **1 week** to **1 day**.
- Developed full-stack features with **TypeScript, React, HTML, and WebSockets** on the frontend, and **Python (Flask) and PostgreSQL** on the backend, enhancing platform interactivity and scalability.
- Designed an automated feedback and autograding pipeline using **AWS Lambda** for course-specific problem sets, improving grading efficiency and reducing human effort in code grading by around **30**%.

Research Assistant Sept. 2024 – Present
CS Education Laboratory *Champaign, IL*
- Engineered the **POGIL** collaborative learning framework in online environments and designed a **JavaScript**-based role selection interface, leading to an increase in average student performance from **94%** to **96%**.
- Conducted large-scale interviews with professors and students across **4** departments to assess CS1 course needs
- Designed and optimized new CS1 curriculum and question sets used for around **1000** students per semester
- Contributed to the **Online Calculus Platform**, a **SIIP**-funded project (**$0.5M**) advancing scalable online learning infrastructure for large-enrollment calculus courses.

Specialist Tech Intern June 2024 – Aug. 2024
ANE Logistics *Hangzhou, China*
- Prototyped **OneAPI**, a unified query interface built on **Apache Calcite** to integrate multiple internal data APIs, improving the maintainability and scalability of the company's data management platform.
- Developed and standardized a **Java**-based data access layer to abstract heterogeneous data sources, including **MySQL, Hive, ElasticSearch**, reducing maintenance costs by approximately **50%**.

Projects

Hybrid Distributed File System (HyDFS) | *Go, Distributed Systems* Jan. 2025 – May 2025
- Developed **HyDFS**, a hybrid distributed file system inspired by **HDFS** and **Cassandra**, integrating consistent hashing and replication across a cluster to ensure scalability and fault tolerance.
- Implemented **append**, **merge**, and **re-replication** protocols supporting per-client ordering, eventual consistency, and automatic data rebalancing under node failures.

StudyBuddy | *Python, JavaScript, React, MongoDB, Docker, Node.js, GCP* Aug. 2024 – Jan. 2025
- Developed a full-stack application for study-partner matching based on age and education-level compatibility.
- Built secure authentication with **Google Firebase/Google Google Cloud Platform**; designed and implemented **MongoDB** schema and established cloud database connections with full **CRUD** functionality
- Developed a **React + TypeScript** front-end module for post creation with real-time form validation, RESTful API integration via **Axios**.

Technical Skills

Languages: Java, Python (pandas, NumPy, Matplotlib, TensorFlow, PyTorch), C/C++, TypeScript, JavaScript, HTML/CSS, Go
Frameworks: React, Node.js, Flask, Express.js, CUDA, FastAPI
Developer Tools: Git, Docker, Maven, Google Firebase, Google Cloud Platform, Amazon Web Services (AWS), Postman, MySQL, MongoDB, PostgreSQL
Theoretical Background: Algorithms, Machine Learning, Deep Learning, Distributed Systems, Operating System