Yihong Song

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EDUCATION

Duke University   Aug. 2022 – May 2025
Bachelor of Science, Computer Science & Mathematics (GPA: 4.00)   *Durham, NC*
Related Coursework: *Data Structures and Algorithms, Computer Architecture, Linear Algebra, Multivariable Calculus, Probability, Natural Language Processing*

EXPERIENCE

Software Developer Intern   May 2023 – Present
Roblox   *San Mateo, CA*
- Worked with infrastructure team to perform database migration onto next-gen storage architecture while maintaining 99.9999% uptime for Roblox's 1500+ services with 1M+ IOPS
- Leveraged CockroachDB Change Data Capture, Kafka topics, and HashiStack to construct data conversion pipeline to OLAP database, ensuring GDPR compliancy of OLTP production database clusters
- Provided secure data access solutions for downstream services, enabling real-time analytics, triage, and debugging in test and production environments

Tech Team Lead   Nov. 2022 – Present
HackDuke   *Durham, NC*
- Led team of 8 student developers in building the 2022 and 2023 Hackduke Website, serving 75K+ monthly visits
- Directed team stand-ups, weekly scrums, and biweekly syncs with design team leads to ensure agile development
- Conducted 30+ technical and behavioral interviews on behalf of the team during the spring 2023 recruitment cycle

Founder   Apr. 2022 – Apr. 2023
Blue Dev Discord Bot   *Durham, NC*
- Built Discord bot to help 1500+ Duke freshmen in registering for popular classes
- Utilized DukeHub REST API to send live notifications of course registration openings to individual students
- Implemented personalized course reminders through a PostgreSQL backend hosted on Oracle Cloud

President & Webmaster   May 2021 – Jun. 2022
Riverside High School National Honor Society (NHS)   *Leesburg, VA*
- Led the largest NHS program in Northern Virginia (310 members, 586 tutored students)
- Empowered members to contribute over 6000 annual service hours to the Northern Virginia community
- Built dynamic web app implementing Google OAuth and Firebase Backend to algorithmically pair NHS members with tutees and community opportunities

PROJECTS

iMessageWrapped | *Electron, Next.js, Three.js, SQLite*   Jan. 2023 – May 2023
- Built dynamic MacOS Electron app to quantify interpersonal relationship strengths based on messaging data
- Implemented Google OAuth for identity verification and built personalized connection networks simulated by Three.js, enabling relationship discovery within close friend networks
- Received 1st Place out of 30+ projects at annual Duke The Cube Entrepreneurship Club Demo Day

Starzam | *Python, Tensorflow, Scikit-learn, NumPy, pandas, Matplotlib, Git*   Aug. 2021 – May 2022
- Developed a novel asteroseismic (star-quake) technique to measure stellar properties using light curves
- Implemented fourier analysis and a deep learning neural network inspired by Shazam App
- Connected and collaborated with astrophysics experts from NASA and ESA
- Received category 2nd Place award at Regeneron Science and Engineering Fair (RSEF)
- Continuation of previous year's ML research: Predicting Stellar Activity through Asteroseismic Analysis

TECHNICAL SKILLS

Languages: Python, Java, JavaScript, HTML/CSS, C, C#, MIPS Assembly, SQL, Rust, GO, YAML
Libraries/Frameworks: React, Node.js, Next.js, Electron, Tailwind, Firebase, MSSQL, CockroachDB, REST API, gRPC, TensorFlow, Scikit-learn
Developer Tools: Git, VS Code, Vercel, Google Cloud Platform, Oracle Cloud, Docker, Apache Kafka, HashiStack (Terraform, Nomad, Consul, Vault), Grafana, Prometheus, Figma, Jira, Maya, Unity
Foreign Languages: English (Native/Bilingual), Mandarin Chinese (Native/Bilingual), French (Limited Working)