# Yihong Song

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## EDUCATION

**Duke University**  — Aug. 2022 – May 2025
*Bachelor of Science, Computer Science (GPA: 4.00)*  — *Durham, NC*
**Related Coursework:** *Data Structures and Algorithms, Computer Architecture, Advanced Algorithm Design, Computer Graphics, Computer Networks, Distributed Systems, Database Systems, Natural Language Processing, Theory of Deep Learning, Linear Algebra, Multivariable Calculus, Probability*

## EXPERIENCE

**OpenAI**  — Apr. 2025 – Jul. 2025
*Incoming Member of Technical Staff (Intern)*  — *San Francisco, CA*

**Roblox**  — May 2024 – Aug. 2024
*Software Engineer Intern, Infra*  — *San Mateo, CA*
- Designed and implemented language-agnostic test data management API gateway available to integration test authors in all staging environments, enabling concurrent and isolated integration testing across all Roblox services
- Simplified and centralized creation of complex data models with automated test data cleanup and provided capability for active and passive endpoint status monitoring
- Kicked off onboarding for critical service owners and distributed endpoint ownership, scalable to all Roblox teams

**Pingr**  — Jan. 2024 – May 2024
*Co-founder*  — *Durham, NC*
- Built macOS native iMessage client that broadcasts texts to individual users using SwiftUI and CoreData cache
- Launched on HackerNews and Twitter with 8k+ total engagements and fostered cohort of 45 beta testers
- Won The Cube Entrepreneurship Challenge and received $1000 grant from Duke I&E Startup Competition

**Roblox**  — May 2023 – Aug. 2023
*Software Engineer Intern, Infra*  — *San Mateo, CA*
- Leveraged CockroachDB Change Data Capture, Kafka, HashiStack, and Grafana to construct high-performance OLAP data access solutions for downstream Data Platform teams, ensuring GDPR compliance of OLTP production database clusters during migration, impacting 25% of all Roblox tables
- Enhanced integration test coverage for Roblox's centralized storage service with Rust, Docker, and Github Actions
- Improved CDC-based database migration pipeline by enhancing Debezium connector state management workflow

**HackDuke**  — Nov. 2022 – May 2024
*Tech Team Lead*  — *Durham, NC*
- Designed systems infra for BlueRide airport rideshare app using Express backend to pair 200+ Duke students
- Led team of 8 student developers in building the 2022 and 2023 Hackduke Website, serving 75K+ monthly visits

## PROJECTS

**BetterMessages** | *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

**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
- 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, Rust, SQL, C, C#, Go, Java, Swift, JavaScript, HTML/CSS, MIPS Assembly, YAML
**Libraries/Frameworks**: MSSQL, CockroachDB, Firebase, MongoDB, REST API, gRPC, TensorFlow, Scikit-learn, React, Node.js, Next.js, Express.js, Electron, Tailwind
**Developer Tools**: Kafka, Consul, GCP, OCI, Docker, Terraform (Infra Management), Nomad (Orchestration), Vault (Key Management), Grafana (Monitoring), Prometheus, Codecov, Vercel, Git, Jira, Maya, Unity