Jared Ni

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EDUCATION

Harvard University *Cambridge, MA*
BA/MS in Computer Science, GPA 3.8/4.0 Aug. 2021 – May 2025

- **Leadership/Activities:** Teaching Fellow for CS 61: Systems Programming, Tech Lead at Harvard Datamatch, Project Manager and Director at Harvard Machine Intelligence Community, ML Researcher at Harvard Edge Computing Lab.

SKILLS

Back-end Development: Java, C/C++, Python, NodeJS, Spring, Flask, AWS, MongoDB, PostgreSQL, Firebase, SQL.
Machine Learning: R, TensorFlow, PyTorch, Pandas, NumPy, Gymnasium, Deep Learning, Classification, Recommendations.
Systems Development: gPRC, distributed computing, Linux/Unix, x86 Assembly, Kubernetes, Sockets, Internet of Things.
Front-end Development: ReactJS, Redux, JavaScript, HTML, CSS.

EXPERIENCE

Salesforce *San Francisco, CA*
Software Engineer Intern June 2023 – Current

- Architected the integration of a runtime vulnerability scanner into cloud security infrastructure, utilizing Docker to containerize API for scalable runtime vulnerability testing of hundreds of Salesforce web domains.
- Engineered scanner executor and receiver libraries interfaced with AWS to perform security scans, generating 50+ Gigabytes of alert data weekly to help product teams identify and patch app vulnerabilities and ensure the safety of customer data.
- Creating a robust data pipeline parser that cleans and sanitizes data for training machine learning models focused on security detection, analysis, and assessment.

Harvard Edge Computing Lab *Boston, MA*
ML Research Assistant Feb. 2023 – Current

- Created an OpenAI Gym Environment for incorporating ML agents and a distributed deep learning simulator to study architectural design space exploration, using $O(10^{51})$ combinations of parameters.
- Engineered and incorporated bio-inspired, probabilistic, and reinforcement learning algorithms as environment agents.
- Conducting experiments on the accuracy of ML agents using manually-calculated results as benchmarks.

Harvard University *Cambridge, MA*
Course Assistant Aug. 2022 – Dec. 2022

- Led office hours weekly for 850 students, delivering instructions on core CS concepts such as algorithms and data structures in C and Python, database and SQL, and full-stack web development using Flask and JavaScript.

Fidelity Investments *Boston, MA*
Software Engineer Intern June 2022 – Aug. 2022

- Migrated proprietary research data accessed by hundreds of financial analysts from 500+ Microsoft Teams channels to AWS cloud by creating a Java Spring Boot service with 90%+ code coverage and automated CI/CD pipeline.
- Reduced service latency by 75% (90 seconds) by designing and implementing a parallel scheduler program for efficient data fetching and processing.

Arda Impact *Cambridge, MA*
Software Development Intern Oct. 2021 – May 2022

- Designed, engineered, and delivered an Android application used by hospitals and clinics in The Gambia to request and track drone-delivered medical supplies in real-time, connected to Arda's drone flight-control backend system.
- App received $70k in initial funding, in partnership with The Gambian Ministry of Health and Medical Research Council UK.

PROJECTS

Brain Tumor Classification Model | *Python, TensorFlow*

- Created a deep learning model that diagnoses and classifies brain tumors using patient MRI data with 97% accuracy.
- Trained using convolutional neural network, data augmentation, and transfer learning techniques.

Stationary T-Stop Railing Emergency Siren System (STRESS) | *gRPC, Python, C++, Arduino and sensors*

- Client-server project that monitors train track intrusion by feeding Arduino sensors data to a gRPC server.
- Upon sensing human motion within a train track, server alarms training API to shut down the arrival of incoming trains, flashes the system's LED warning lights, and broadcasts alarm messages to notify bystanders for help.
- Implemented replication, consensus, and server-side leader election algorithms to handle Byzantine failures.

Datamatch Web App | *ReactJS, NodeJS, Redux, Python, Google Firebase*

- Co-led a team of 20 developers for the largest college matchmaking app in the US, with 52k users and 235k matches.
- Engineered messaging, authentication, and various landing pages using React and Firebase Cloud Functions.
- Implemented social media integration using graph APIs, enabling thousands to share to various social media sites directly.