Alex Li

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EDUCATION

University of California, Berkeley   Berkeley, CA
Bachelor of Science, Electrical Engineering and Computer Science   Expected Graduation, May 2026
- **Coursework**: Data Structures and Algorithms, Artificial Intelligence, Databases, Linear Algebra, Discrete Math, Computer Systems and Networks, Computer Organization, Object-Oriented Programming, Probability & Stats
- Transferred from Georgia Tech B.S. Computer Science GPA: 4.0

SKILLS

Languages: C, C++, Java, Python, JavaScript/Typescript, HTML, CSS, Linux, LaTex
Libraries/Tools: React.js, Node.js, Express, Redux, AWS, MySQL, Firebase, MongoDB, Git, Github, Docker, NumPy

EXPERIENCE

Amazon   May 2024 - Aug. 2024
Software Development Engineer Intern
- Streamlined data processing efficiency by implementing an ETL pipeline with the AWS CDK that parses an average of over 3,000,000 Cloudwatch API logs on a weekly basis into a centralized DataLake
- Created a transformation lambda for filtering/data conversion and optimized performance in S3 bucket through dynamic key partitioning with a Glue Crawler for data cataloging, written in Typescript
- Configured Kinesis Data Firehose for real-time data ingestion through Cloudwatch events, and set up a weekly scheduled Apache Spark job over the aggregated data. Utilized Athena and QuickSight to generate BI reports

College of Computing   Jan. 2024 – May 2024
Teaching Assistant - Data Structures and Algorithms (CS 1332)
- Responsible for grading homework and exams, ensuring timely and constructive feedback for 1000+ students
- In charge of teaching weekly recitations and holding office hours for students, providing guidance on course topics
- Refined JUnit autograder tests for potential bugs and working on adding improvements on csvistool.com

Bits of Good   Aug. 2023 – May 2024
Software Developer
- Working in developing web-app applications that support non-profits, currently aiding the Brain Exercise Initiative, a non-profit aimed at improving cognitive function in those with Alzheimer's that supports 1300+ volunteers
- Created backend NextJS API endpoints for admin authentication purposes and utilized Nodemailer and .pug templates to automate email notifications to volunteers. Added full-stack features to the analytics dashboard

FIRST Robotics   Aug. 2019 – Jun 2023
Lead Programmer
- Led programming efforts in teaching newer members about object-oriented programming and using the FTC SDK
- Employed AprilTag detection and motion profiling algorithms in Java to improve object recognition and precision
- Utilized computer vision and machine learning libraries such as OpenCV and Google's Teachable Machine to detect and classify objects to optimize autonomous scoring up to 99% detection accuracy

PROJECTS

GradGoods
- Implemented an item exchange platform for students. Frontend written in React with TailwindCSS/Chakra styling
- Built the backend with Django for RESTful API crud operations. Utilized AWS S3 for image storage and SQLite for relational data, alongside the OpenAI GPT-4o mini API for waste estimations from user data

Feed-Forward Neural Network
- Built a feed-forward multi-layer neural network in Python from scratch, achieving 90.6% average accuracy on the MNIST dataset for digit classification through tuning hyperparameters.
- Implemented sigmoid activation functions and perceptron-based backpropagation to optimize neural network performance and ensure robust classification results.

Pawgress
- Developed a training management app for pets using Next.js, React, Node.js, MongoDB, and CSS
- Implemented encryption with user login functionality, utilizing JWT authentication and secure cookies, pagination for efficient data retrieval.