

Jason L. Fu

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Education

Cornell University, College of Engineering

Bachelor of Science in Computer Science, Minor in Artificial Intelligence

GPA: 3.93

Relevant Coursework: Machine Learning, Computer Networks, Object-Oriented Programming and Data Structures, Data Structures and Functional Programming, Analysis of Algorithms, Computer System Organization and Programming, Systems Programming, AI Reasoning & Decision Making

Ithaca, NY

Aug 2023 - May 2027

Experience

Software Engineering Internship

HYC USA

Fremont, CA

Jun 2025 - Aug 2025

- Developed a full-stack warehouse management system using FastAPI, SQLite, and JavaScript with agile software development, enabling real-time data synchronization for 50+ enterprise users with secure authentication.
- Implemented secure RESTful APIs with JWT authentication, role-based access control, and Alembic database migrations, supported by automated testing pipelines to ensure reliability and scalability.
- Engineered a responsive web application with advanced search, multi-language support, and CI/CD deployment pipeline, improving data retrieval speed by 30% through scalable software design and project management.

Software Engineering Internship

HYC USA

Fremont, CA

Jun 2024 - Aug 2024

- Integrated Meta Llama 3.1 language models into in-circuit testing automation using Python GUI, PyTorch, and Transformers, enabling speech recognition and text-to-speech capabilities for streamlined workflows.
- Optimized testing workflows for Apple, Tesla, and Meta circuits by designing a PyQt5-based testing GUI, reducing testing time by 15% through efficient information retrieval and data-driven software optimization.

Projects

Structured Textual Data Ingestion Pipeline

Cornell AguaClara

Ithaca, NY

Feb 2025-Present

- Developed an AWS-powered pipeline (Bedrock, S3, Lambda, API Gateway, OpenSearch, Cognito) to ingest and retrieve structured textual data, enabling researchers to search across 40GB+ of AguaClara's research repositories.
- Implemented RESTful APIs with Lambda to enable retrieval-augmented generation (RAG) for LLM responses.
- Automated infrastructure with AWS CDK, SQS, and Step Functions; secured authentication with Cognito and designed a frontend file upload interface with error handling for 50 team members.
- Configured CI/CD pipelines using AWS SAM, automating testing and deployment processes.

Plant Operations Smartphone Tracker | <https://github.com/AguaClara/aguadatos-amplify-android>

Cornell AguaClara

Ithaca, NY

Jan 2024-May 2025

- Designed and launched POST, an Android application (Flutter, Kotlin, Jetpack, Postman, Figma) to help operators in Central America and India monitor and analyze water filtration data, improving efficiency for plants serving 101,000+ people.
- Developed responsive frontend with Kotlin, XML, and Jetpack; integrated modern Android architecture components for a seamless user experience.
- Contributed to an offline-first backend with AWS Amplify, Cognito, AppSync (GraphQL), DataStore, and DynamoDB, leveraging MongoDB-style data modeling and database management for offline synchronization.

EduConnect.AI | <https://github.com/jlfud/ai-hackathon-educonnect>

Hackathons at Cornell University

New York, NY

Feb 2025-May 2025

- Collaborated on a full-stack web application to match students with nonprofit organizations, using React and Streamlit (Python) for an AI-driven frontend experience.
- Prototyped a matching algorithm leveraging OpenAI API for prompt classification and SerpAPI for retrieval-augmented generation (RAG) to enhance nonprofit discovery and recommendations.

Technical Skills

- Languages:** Python, Java, C, C++, JavaScript, TypeScript, SQL, Kotlin, OCaml, HTML/CSS
- Frameworks/Libraries:** ReactJS, Node.js, Express, FastAPI, Flask, MongoDB, GraphQL, Pandas/NumPy, scikit-learn, PyTorch, TensorFlow, Hugging Face Transformers
- Tools:** Git, Docker, Postman, GitHub Actions (CI/CD), pytest, JUnit, Alembic, OpenAI API, RESTful APIs, AWS (Lambda, S3, DynamoDB, Amplify, CloudFormation / CDK, Cognito, Step Functions, SQS), SQLite