

IVAN LIN

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EDUCATION

Rochester Institute of Technology
Bachelor of Science in Software Engineering

July 2021 – May 2026
Rochester, NY

EXPERIENCE

Systems Development Engineer Intern

Amazon Web Services

May – Aug. 2025
Seattle, WA

- Engineered a serverless workflow in TypeScript and Python using AWS CDK to automatically synchronize RDS dynamic action modifications made on DynamoDB tables across isolated, multi-region, multi-partitions, and AWS accounts, reducing manual effort by 80% and ensuring data consistency
- Architected fault-tolerant cross-domain transfers between high-side and low-side environments using AWS Diode and Step Functions; leveraging parallelism and concurrency control to guarantee reliable data delivery
- Designed and implemented a monitoring and alerting system using CloudWatch, SNS, and Lambda to track workflow performance and automatically notify stakeholders of any transfer failures, improving system reliability

Software Engineer Intern

Georgia Tech Research Institute

May – Aug. 2024
Orlando, FL

- Developed a GDAL-based tracking module for a 3D Aircraft Safety Equipment (ASE) simulator, parsing KML data to animate point-to-point aircraft movement and continuously display real-time geospatial coordinates
- Modernized the ASE B-Kit Emulator (ABE) training system for 3,500+ personnel by overhauling .NET WPF/XAML UIs, refactoring core C++ and C# logic, and integrating new simulated flight maneuverability features
- Designed a Selenium-driven synchronization tool in Python to bypass manual UI constraints in Confluence, programmatically updating 1,500+ stale records and eliminating 100% of the associated manual efforts
- Deployed 15+ high-performance C++ data parsers into a real-time processing ASE pipeline, expanding detection and categorization of complex signal patterns while in flight by 40%

Data Engineer Intern

Integral Ad Science

June – Aug. 2023
New York, NY

- Collaborated on an automated ETL pipeline using Python, Airflow, and Boto3 to ingest and filter raw data from AWS S3 buckets to Snowflake and automating real-time operational monitoring via Grafana
- Developed a GCP Cloud Composer DAG using Python and Pandas to preprocess 100+ PB of Google video partner data in BigQuery ML and create interactive Plotly reports to visualize trends and anomalies

PROJECTS

Bidiinet | Python, Django, Svelte, Docker, Github Actions

- Architected a platform as a capstone project for scholars to find academic career opportunities in Africa, serving applicants, hiring managers, HR managers, and admins on a 5-level hierarchical RBAC permissioning system
- Implemented JWT authentication using HttpOnly cookie transport with single-session enforcement and RBAC, ensuring robust security across the platform
- Modeled a job lifecycle state machine using Django ORM with custom model managers and QuerySet methods, enforcing valid state transitions and enabling efficient filtering and aggregation application workflows

MIDI Synthesizer | C, ADC/DAC, USART, SysTick, GPIO, Interrupts

- Programmed a MIDI file player on an STM32 ARM microcontroller in C, implementing a custom MIDI parser, DAC audio output, SysTick timer, and UART-driven UI with interrupt-based button controls

TECHNICAL SKILLS

Languages: Python, Java, C++, C, C#, TypeScript, JavaScript, SQL

Frameworks: React, Next.js, Angular, Svelte, .NET, Spring Boot, Django, FastAPI, Flask

Databases: PostgreSQL, MongoDB, MySQL, Redis

Cloud & DevOps: AWS, GCP, Docker, Terraform, GitHub Actions

Developer Tools: Git, GitHub, GitLab, Unix/Linux, Postman, Jest, Selenium, Maven

Concepts: Object-Oriented Programming, CI/CD, RESTful APIs, Data Structures & Algorithms