

Le (Nolan) Mai

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EDUCATION

Kahlert School of Computing, University of Utah
Bachelor of Science in Computer Science; GPA: 3.8/4.0

Salt Lake City, UT
Expected May 2027

EXPERIENCE

Scientific Computing and Imaging Institute (University of Utah)
Assistant Research Engineer

Aug 2024 – Present
Salt Lake City, UT

- Developing interactive data visualizations using D3.js and SvelteKit to represent complex computer architecture experiment metrics.
- Collaborated with simulation engineers from the College of William & Mary to transform thousands of raw performance metrics into user-friendly charts, cutting analysis time by 80%.
- Optimized rendering performance by 20%, supporting real-time interaction with large-scale datasets.

InCaria - A Lifestyle Analysis Platform/Tech Startup
Fullstack Software Engineer Intern

Jan 2025 – May 2025
Salt Lake City, UT

- Developed a cross-platform mobile app using React Native with TypeScript, contributing 20% toward MVP completion by building core interface components and user workflows.
- Integrated the React Native front end with a secure Django/PostgreSQL backend via RESTful APIs, ensuring real-time synchronization in health and lifestyle data handling.

Smart Education Now Technologies (SENTECHS)
Software Engineer Intern

Jun 2024 – Aug 2024
Ho Chi Minh City, Vietnam (On-site)

- Developed an advanced analysis tool using multiple APIs to extract insights from IELTS passages, accelerating the product launch by 10%.
- Maintained a vocabulary-scraping pipeline with MongoDB, enhancing data feeding for the company's LLM model by 25%.
- Implemented RESTful endpoints for real-time data retrieval, managing 2,000+ daily queries.

PROJECTS

sParky: Wildfire Prediction Web App | *React, Node.js, AWS, OpenWeather*

- Engineered a full-stack AI-powered web app with a RESTful Node.js backend predicting wildfire and air quality threats using live sensor data.
- Trained and deployed an ML model on AWS SageMaker with 78.6% accuracy, estimating wildfire probability and spread radius across Utah's microclimates.
- Generated personalized health advisories and hyper-local forecasts for 50+ locations daily via AWS Bedrock, powered by real-time OpenWeather AQI inputs.
- Enabled dynamic wildfire risk visualization using AWS Location Services, increasing platform engagement by 60% through interactive, map-based insights.

Qt-Based Sprite Editor | *C++, Qt UML*

- Developed a Qt-based editor in C++ featuring pixel-level RGBA editing with QImage/QPainter and intuitive mouse-driven draw/erase tools.
- Built a real-time animation preview engine using QTimer and custom QWidget rendering, allowing dynamic FPS control for smooth playback.
- Engineered JSON serialization to persist sprite projects—including per-pixel data and metadata—for seamless save/load functionality.
- Designed system architecture with UML class diagrams and leveraged Qt's signal/slot framework to implement a clean, event-driven module structure.

TECHNICAL SKILLS

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

Web Development: PERN/MERN stack, React Native, SvelteKit, Blazor, D3.js, Django, SpringBoot

Databases: SQL, PostgreSQL, MongoDB, Supabase

Tools & Other: Git, Docker, REST APIs