Rick Liu

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Skills

Languages	JavaScript/TypeScript • Python • C/C++ • C# • Java • PHP • HTML/CSS • SQL
Technologies	React/React Native • Angular • Express • ASP.NET • Docker • AWS • Git • Jenkins

Experience

Nuvation Energy   Waterloo, Canada
Staff Software Developer Intern   Aug 2024 – Present

Ansys   Waterloo, Canada
Software Developer Intern   Jan 2024 – Apr 2024
- Co-developed unit testing framework in Node.js to verify deployment and properties of Azure resources
- Built telemetry library with tools and middleware to connect Express apps to Azure Application Insights
- Wrote extensive unit tests in Mocha/Chai and improved existing testing procedures and documentation

Capital One   Toronto, Canada
Associate Software Developer Intern   May 2023 – Aug 2023
- Investigated cross-platform frameworks as alternative to native mobile development and pitched findings
- Ported credit card pre-approval web app to iOS and Android using React Native as proof-of-concept

Dealer-FX   Markham, Canada
Software Developer Intern   Sep 2022 – Dec 2022
- Improved AngularJS and ASP.NET vehicle check-in web app to fetch telematic data from GM vehicles
- Refactored Angular appointment scheduler and improved unit test coverage to reduce tech debt

Idea Notion   Markham, Canada
Software Developer Intern   Jan 2022 – Apr 2022
- Rewrote WordPress, Laravel and MySQL e-commerce store, obsoleting three third-party plugins
- Migrated 70k images to WEBP and applied optimization techniques, reducing initial data transfer by 15%

Financial Services Regulatory Authority of Ontario   Toronto, Canada
IT Systems Analyst Intern   Apr 2021 – Sep 2021
- Upgraded React, ASP.NET and MSSQL file submission portal to support hosting interactive web forms
- Extended in-house form language with new features to facilitate its adoption by three internal teams

Projects

TachyonDB – Lightweight Serverless Time Series Database   May 2024 – Present
- Worked on team of five to develop SQLite-like time series database in Rust as fourth-year design project

AI Art Detector (GitHub)   Oct 2023
- Trained CNN on 50k images using PyTorch to classify real and AI art with 88% precision and 94% recall
- Built Angular, Django and PostgreSQL web app and deployed it using AWS, Docker, Nginx and Jenkins

Education

University of Waterloo   Waterloo, Canada
Bachelor of Software Engineering (Expected) – 3.95 GPA   Sep 2020 – Apr 2025