

Lucas Palazzi

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SKILLS

Programming languages: JavaScript/TypeScript, HTML/HTML5, CSS, C#, Python

Frameworks/libraries: React, Node.js, Express.js, MongoDB, PostgreSQL, Redux, TailwindCSS, Remix/React Router

Tools/services: Git/GitHub, Linux, Docker, Digital Ocean, GCP Cloud Run, Sentry, Jest, Jira, Agile, CI/CD, Unity

EDUCATION

Masters (MAsc), Electrical and Computer Engineering

University of British Columbia

Jan 2018 – Nov 2019

Vancouver, BC

Research areas: *Fault tolerant computing systems, fault injection techniques*

Course highlights: *Machine Learning and Data Mining (93%), Error Resilient Computing Systems (90%)*

Bachelors (BAsc), Electrical Engineering • Minor, Mathematics

University of Windsor

Sep 2013 – Oct 2017

Windsor, ON

WORK EXPERIENCE

Software Developer

Freelance / Contract

July 2024 – Present

Remote

- **REEL Outline Inc:** Collaborating with a diverse team to deliver a full-stack clinical pharmacy product to market. Developed a component-based document rendering and viewing feature using React and Redux, ensuring accurate display of patient data and information within an interactive, responsive interface.
- **Windsor Law Centre for Cities:** Building and managing public-facing websites and content using React and WordPress. Managing hosting and deployment with Digital Ocean.

Full Stack Software Developer

XYZ Digital Inc.

Jan 2023 – July 2024

Vancouver, BC (Remote)

- Contributed to the development and management of a variety of software products, including front-end and back-end development, bug fixes, graphic design, and client relations
- Led the full lifecycle development of a user-facing full-stack application using React, Node.js, Express.js, and MongoDB from concept to production
- Architected and integrated multiple backend services, including a Node.js REST API with user authentication and MongoDB database integration
- Managed cloud-based Linux server infrastructure and implemented a CI/CD pipeline with automated unit testing using Jest, ensuring reliable deployment and reducing bugs in production

Full Stack Software Developer

Dubsado

Jan 2021 – Dec 2022

Burbank, CA (Remote)

- Collaborated with cross-functional teams in an agile environment to deliver user-facing product features using React and Node.js, including developing user interfaces, building REST API services, writing and maintaining unit tests, and participating in code reviews
- Implemented a cross-stack typing system using TypeScript and refactored back-end REST APIs, enhancing type safety between client and server code and improving maintainability

Software Developer

DataRealm Inc.

Feb 2020 – Dec 2020

Windsor, ON

- Collaborated with engineers and technicians to develop an augmented reality (AR) platform for operator training in the manufacturing industry, utilizing Microsoft HoloLens, C#, and Unity game engine
- Developed an API using C#.NET to facilitate communication between HoloLens devices and database servers, enabling CRUD operations and streamlining the application's process and usability

Engineering Co-op Student*ArcelorMittal Windsor***Sep 2016 – Dec 2016***Windsor, ON*

- Installed and programmed PLC logic for various factory automation projects
- Produced comprehensive technical documentation for an in-house engineered magnetic filtration system, including process flow diagrams, timing charts, and system overviews, to support engineering reference, training, and troubleshooting

Co-op Student*DataRealm Inc.***Jan 2016 – Apr 2016***Windsor, ON*

- Developed a Human-Machine Interface (HMI) using Phoenix Contact Visu+ to monitor and control a shaft ventilation system, enabling both automatic and manual operations with graphical representations of equipment status
- Developed an IP address management application using Ignition (SCADA platform), integrating SQL Server and Python scripting to track device IP allocations and validate connectivity through automated ping checks

Engineering Co-op Student*FCA Canada - Automotive Research and Development Centre***May 2015 – Aug 2015***Windsor, ON*

- Conducted a comprehensive study to validate the accuracy of an advanced automotive lighting evaluation system, comparing its performance against traditional handheld lux meters to support predictive analysis for headlamp ratings
- Built a data entry system with automated statistical analysis and report generation for automotive lighting research, streamlining the experimental process and standardizing analysis

PUBLICATIONS

Palazzi, L., Li, G., Fang, B., & Pattabiraman, K. (2020). Improving the accuracy of IR-level fault injection. *IEEE Transactions on Dependable and Secure Computing*, 19(1), 243-258.

Palazzi, L. (2019). Experimental evaluation of software-implemented fault injection at different levels of abstraction (*Masters thesis, University of British Columbia*).

Palazzi, L., Li, G., Fang, B., & Pattabiraman, K. (2019, October). A tale of two injectors: End-to-end comparison of ir-level and assembly-level fault injection. In *2019 IEEE 30th International Symposium on Software Reliability Engineering (ISSRE)* (pp. 151-162). IEEE.