

# Patrick Du

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## Skills

**Languages:** JavaScript, TypeScript, Ruby, Python, SQL, GraphQL, C#, HTML/CSS  
**Frameworks & Libraries:** React, Node (Express), Ruby on Rails, ASP.NET  
**Cloud and Tools:** Git, MongoDB, PostgreSQL, Docker, RSpec, JIRA, Figma

## Experience

### Incoming Software Developer // D2L

Jan - Apr 2021 • Kitchener, ON

### Software Engineer // ApplyBoard

May - Sept 2020 • Kitchener, ON

- Developed a complex data table to handle critical inefficiencies in existing requirement mapping system, reducing student application pushbacks by roughly 80%
- Built and tested several REST API endpoints using Ruby on Rails & RSpec to support multi-level entity mappings
- Leveraged event debouncing across 10+ filter components by implementing a custom-built memoized hook in React to eliminate expensive network requests, reducing unnecessary DOM re-renders
- Led the research and execution of integrating ESLint into 3 repositories to enforce code consistency amongst 50+ engineers

### Software Developer // Oculys Health Informatics

Sept - Dec 2019 • Waterloo, ON

- Developed a C# console app that integrates JIRA issue logs with Harvest timesheets, automating a weekly 30-minute time-log process
- Automated internal support team tasks using ASP.NET MVC in a service-oriented architecture by implementing a location service within the client UI, eliminating patient flow bottlenecks
- Refactored 1500+ lines of production C# into real-time patient activity tracking dashboards used by 10+ hospitals

### Web Developer // FGF Brands

Jan - Apr 2019 • Toronto, ON

- Constructed a component-based UI library with HTML/CSS and JavaScript, serving as a style guide for internal tools development to improve production speed and handle responsive web design
- Built a progressive web app with offline support and push notifications to streamline manufacturing team processes, such as inventory checks and plant issue reports

## Leadership

### Software Developer // UW Blueprint

Jan 2020 - Present • Waterloo, ON

- Developed a web client for an NPO featuring interactive flowcharts that improves the accessibility of social service information
- Wrote scalable front-end flowchart components with TypeScript and React to tackle modular backend data

## Projects

### Serenity // React, Node (Express), MongoDB, Passport.js

Sept 2019 - Present

- A social wellness web platform that assesses mental well-being through mood tracking and data visualization patterns
- Utilized Passport.js and local storage to implement OAuth 2.0 and JWT-based authentication for cross-app cybersecurity
- Implemented a REST API using Node (Express) and MongoDB to support CRUD operations

## Education

### University of Waterloo // Honours Kinesiology (B.Sc.) with Computing Minor

Sept 2017 - May 2022

- Relevant Courses: Computer Science I & II, Data Types & Structures, Human-Computer Interaction