

# Martin Ivanov

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## EDUCATION

**McMaster University** | Bachelor of Engineering in Software Engineering Co-Op September 2020 – May 2024

- **3.7/4.0 Cumulative GPA**, McMaster President's Scholarship, Dean's Honour Roll
- Relevant courses: Data Structures & Algorithms, Object-Oriented Programming, Digital Systems & Interfacing

## RELEVANT WORK EXPERIENCE

**Software Developer Intern** September 2021 – Present

Peernet.co | Toronto, ON (Remote)

- Developed scalable features for a student social collaboration platform with **2100+ users** across **3 universities**
- Designed, built, and tested web components using **React**, **Redux**, and **React Query** in a full-stack environment
- Constructed RESTful APIs with **Express/Node** and used **Postman** to perform **100+ API tests** in development
- Built a convenient GPA calculator with automated course data entry that was used by over **20%** of active users
- Developed a homework help feature for students to ask questions in **9000+** unique course forums
- Deployed **25+** novel features and updates to the site in weekly **Agile** sprints as part of a small start-up team

## PROJECTS

**Eatsy — Meal Planning App** 🌐 🔗

- Developed a full-stack web application for planning meal portions to help users stretch grocery budgets
- Built a **React** front-end with Google Calendar style functionality, prioritizing a smooth user experience
- Implemented a full user authentication system using **JSON Web Tokens** and **bcrypt** for encryption
- Constructed a REST API using **Express** and **Node** to create, read, update, and delete data from **MongoDB**
- Reduced monthly grocery spending by over **30%** after consistently using the application for one month

**JobBase — Job Application Organiser** 🌐

- Developed a desktop program to map job search progress by tracking and visualising job application data
- Constructed a user-friendly **Java Swing GUI** to allow the user to intuitively create, update, and delete records
- Created and connected to an **Amazon Web Services RDS MySQL** cloud database to store user job app records
- Algorithmically consolidated data from **200+ records** to generate heatmaps, Sankey diagrams, and pie charts

**RealLight — Ray Tracing Simulator** 🌐

- Created a ray-tracer in **C++** capable of rendering high resolution images of objects with lifelike lighting
- Applied linear algebra and physics concepts to realistically simulate diffusion, reflection, and refraction of light
- Utilised multi-threading to reduce the time spent rendering images by **40%** through concurrent execution

**Driving Test Availability Finder** 🌐

- Implemented a **Selenium** browser to automate the process of checking for new driving test availabilities
- Set up a **Python** SMTP system to automatically email the user as soon as a new appointment opened up
- Reduced waiting time to get a driving license by **70%** through automatically running the script **75+** times a day

## SKILLS

**Languages & Libraries/Frameworks:** JavaScript, HTML/CSS, Python, Java, C, C++, React, Express, Node.js, Bootstrap

**Tools:** Git, Linux, Bash, MongoDB, SQL, Heroku, Netlify, Jira, Trello, VS Code, IntelliJ, NetBeans, Postman, AWS RDS