Charley Liu

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EDUCATION

Bachelor of Science in Computer Science (CO-OP)   Sep. 2022 - Present
University of Ottawa   *Ottawa, ON*
- **GPA:** 3.97/4.0
- **CO-OP:** currently looking for a 4 or 12 month co-op starting **Winter 2025**

EXPERIENCE

IT & Platform Support Co-op Student   May 2024 – Aug 2024
National Research Council Canada   *Ottawa, ON*
- Redesigned internal staff tools by developing **Power Apps** Solutions for **8,000+** National Building Codes, utilizing **Power Platform**, **.NET**, & **Azure**
- Accelerated database queries by up to **250%** by optimizing table schemas/dependencies in **Microsoft Dataverse**
- Eliminated manual maintenance for Building Codes by creating & deploying automated workflows in **C#**
- Transformed raw project timeline data into actionable insights with **Power BI**, creating clear and readable reports

Full Stack Developer   May 2023 – Apr 2024
University of Ottawa – CEED   *Ottawa, ON*
- Developed & maintained features for a web app as part of a collaborative team, ensuring timely & efficient delivery using **Ruby on Rails** & **AWS**
- Improved **business intelligence** for **90,000+** lab sessions by creating a visual report generator for admin users
- Established accurate handling of **calendar time blocks** across different time zones, enhancing **site reliability**
- Utilized industry standards in **testing** & **CI/CD** to uphold **80%** coverage for test pipelines in **Github Actions**

PROJECTS

MechForum - Full Stack Forum App 🐙 | *Next.js, React, Typescript, Tailwind, Prisma, AWS*   May 2024
- Created a web application that allows users to **document & share** their custom mechanical keyboard builds
- Ensured safe & secure **password storage** by utilizing **Slow Hashing** algorithms, preventing brute-force attacks
- Optimized image quality, storage, and **cost efficiency** by utilizing **AWS S3** bucket storage for images & videos
- Established countermeasures for DDoS and spam attacks by integrating **CAPTCHA solutions** & **rate limiting**

Medihub - Healthcare Management App 🐙 | *Java, Android Studio, Firebase, XML*   Oct. 2023
- Developed a mobile **healthcare management system** that manages appointments between doctors and patients
- Gathered project requirements & modelled **UML diagrams**, ensuring proper migration into the database schema
- **Spearheaded development** by integrating **Firebase Authentication** & **Database** into our local environment
- Worked with a team of 3 with GitHub, utilizing code review to ensure high-quality, collaborative development

P2P File Share 🐙 | *HTML, CSS, Javascript, React*   Mar. 2023
- Designed a web application that lets users share files on their browsers using **Peer-to-Peer** connections
- Implemented **room-based connections** with unique generatable URLs that can be shared with ease
- **Collaborated with 2 team members** to conceptualize and complete the project in a short span of **36 hours**
- Streamlined the development workflow by integrating **GitHub Actions** for **automated code deployments**

LEADERSHIP

Computer Science Club Executive   Sep. 2021 – Jun. 2022
Centennial C.V.I   *Guelph, ON*
- **Organized & hosted** weekly events with other club executives
- **Recorded & published** online Data Structures & Algorithms resources for club members
- Helped **foster a community** of high students with interests in Computer Science

TECHNICAL SKILLS

Languages: C/C++, Java, Python, SQL, HTML, CSS, Javascript, Ruby, DAX, FetchXML
Frameworks: React, Node.js, Ruby on Rails, Next.js, JUnit, Arduino
Developer Tools: Git, AWS, Android Studio, Azure, Firebase, Vercel, Github Actions, VSCode
Operating Systems: Windows, MacOS, Linux