

Harlan Jazz Ferguson

FULL STACK SOFTWARE ENGINEER

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Related Work Experience

Software Engineer, George Brown College, R&D Dept., Toronto, On, 01/2024 – 03/2024

- Selected by faculty for a pivotal project to develop a tailored software solution for an industry partner, demonstrating leadership in software engineering.
- Led the design and development of a secure and efficient mobile application and complementary web app within a competitive format. Innovatively addressed partner's challenges, facilitating work-related tasks and automatic report generation, which resulted in a 30% boost in work task efficiency and secured a 2nd place ranking for our team.
- Employed modern and adaptive technologies including an expo managed react-native environment, utilizing key libraries for phone features such as camera, location data, and handling online/offline functionality. Developed the backend using Node.js and Express.js to ensure seamless integration with our mobile app. Our webapp uses HTMX and allows users to create, read, update, and delete (CRUD) data generated from the app.
- Played a crucial role in the development of the mobile application and the backend's key reporting feature, underlining my substantial contribution to the project's success. Proactively led the resolution of critical, app-breaking merge conflicts, maintaining project integrity and adherence to timelines.

Projects

Real-Time Chat Application (Mongo, Express.js, React.js, Node.js, Socket.io, Docker)

Developed a chat web application with instant messaging capabilities. Includes secure user account creation with JWT and password salting/hashing. The server tracks different chat rooms and introduces new users on join. Stored in a mongo database using modern design practices to display chat history to the webapp.

Scavenger Hunt Android App (Java, Android Studio)

Organized the design and development of an app leveraging the Google Maps API, allowing app users to collect real-world locations on a map. Focused on an immersive UX, the app features an outdoorsy aesthetic with AI-generated images, aiming to make the app visually appealing. This project demonstrates my ability to make engaging mobile applications and leading my team to successfully meet project requirements.

Employee Management Web App (MERN stack, Docker)

Created a web app that allows an admin user to perform CRUD operations on employee accounts on the system. Apart from displaying this information about employees, the home page also dynamically populates a chart giving helpful information at a quick glance such as demographics and average employee salaries.

Phishing Email Detection using AI (Python, Flask, Sci-Kit, JavaScript)

Facilitated the creation of an advanced Chrome extension for detecting phishing emails with 90% accuracy. Demonstrated technical skill and flexibility in a dynamic hackathon setting, applying critical problem-solving to develop effective security tools.

Reddit Title Predictor using ML (Python, Django, Sci-kit, Pandas, Typescript, React.js)

Generated a unique dataset using Reddit's API and then applied data cleaning techniques to ensure an accurate representation of data. Built a machine learning classification model using my dataset to achieve an 80% F1 score. Proved my data science abilities as well as my full-stack capabilities by creating a user-friendly web application for users to interact with the model in real time.

****Demos of all my projects can be found on my website****

Achievements

- 2nd place in George Brown College's Design Jam 2024.
- Top 18% in IEEEExtreme 2023 international programming competition with over 20,000 participants.
- Top 27% in IEEEExtreme 2022 international programming competition with over 14,500 participants.
- Competed in Bell GeekFest 2023 / 2022 and ActInSpace International Hackathon 2022.

Education

George Brown College, Advanced Diploma: Computer Programming and Analysis, 09/2021 - 04/2024

- GPA: 3.48 | Dean's Honour Roll.
- Co-founder and VP of GBC Computer Science Club.

George Brown College, Advanced Diploma: Business Administration – Retail, 09/2017 - 04/2020

- GPA: 3.32 | Dean's Honour Roll.

Work Experience

Arcadia Housing Coop | Maintenance Worker and IT Consultant 06/2021 – Present

- **Problem-solving and Innovation:** Demonstrates exceptional problem-solving skills by diagnosing and fixing a wide range of issues, from plumbing to IT systems, optimizing operations and enhancing tenant satisfaction. Employs creative solutions to reduce costs without compromising quality.
- **Communication and Customer Service:** Excels in clear, empathetic communication with tenants and staff, ensuring their needs are met promptly and efficiently, thereby fostering positive relationships, and building trust within the community.
- **Technical Skills and Adaptability:** Provides skillful IT consulting, adapting to rapidly changing technologies and implementing effective security measures to protect digital assets, showcasing the ability to learn and apply new skills swiftly.

Urbane Cyclist | Worker-Owner 03/2012 – 08/2021

- **Sales and Customer Relations:** Drove sales through expert knowledge and personalized service, achieving top gross profit in my department by fostering strong customer relationships and enhancing customer retention.
- **Quality Control and Attention to Detail:** Recognized for delivering high-quality bicycle repairs, leading to a role in quality control. This demonstrated a keen eye for detail and a commitment to excellence.
- **Leadership and Strategic Thinking:** Contributed to the strategic direction of the business by suggesting new revenue sources and implementing HR practices that supported employee success, demonstrating leadership and a proactive approach to business challenges.