

Tyler Hartleb

BSCH, Computer Science

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Work Experience

Software Developer *WestJet* (May 2023 – Present)

- **Payment Application Development:** Developed a seamless payment application using TypeScript and Vue.js, adhering to PCI DSS 4.0 standards.
- **Application Migration:** Assisted in migrating existing applications to modern frontend frameworks, improving performance and maintainability.
- **Test Suite Expansion:** Expanded test suites for existing applications by implementing unit, integration, and mutation testing to ensure robust software quality.

Software Developer Intern *WestJet* (May 2021 – October 2022)

- **Web Application Development:** Created robust browser-based web applications using modern JavaScript libraries, following industry-standard practices.
- **Application Maintenance:** Improved existing applications to maintain their usability, performance, and sustainability.
- **Specification Preparation:** Worked with business stakeholders and designers to prepare functional and design specifications for new features and products.

Education

University of Calgary (June 2023)

Bachelor of Science Honours, Computer Science / First Class / Dean's list

- Cumulative GPA: 3.84

Publications

Hartleb, T., Kim, H., Zhao, R., Aqlan, F., & Yang, H. (June 25, 2023). "Exploring Magic Interactions for Collaboration in Virtual Reality Learning Factory." *ASEE Annual Conference and Exposition, Conference Proceedings*.

Kim, H., Hartleb, T., Bello, K., Aqlan, F., Zhao, R., and Yang, H. (October 10, 2023). "Behavioral Modeling of Collaborative Problem Solving in Multiplayer Virtual Reality Manufacturing Simulation Games." *ASME. J. Comput. Inf. Sci. Eng.* March 2024; 24(3): 031006. <https://doi.org/10.1115/1.4063089>

Projects

Helm Capstone Project

- **Email Notification System:** Developed a robust system using Python and Django to notify users about key changes in selected financial statistics.
- **PDF Report Customization:** Created a user-friendly customization tool with Vue.js and JavaScript, enabling users to personalize financial reports with company logos and descriptions before emailing them to clients.
- **Technical Research:** Conducted in-depth research for the implementation of a mobile application to extend project capabilities.

Exploring User-Defined Emotional Perception in Non-Anthropomorphic Robots

- **Data Collection and Review:** Collected and analyzed data on user-defined movements of Toio robots to understand emotional perception.
- **Literature Review:** Studied and evaluated existing research on how movement influences emotional perception in robots.

AR Shopping Application

- **Application Development:** Studied and developed an augmented reality (AR) application using Unity to enhance shopping experiences in retail environments.
- **User Experience Enhancement:** Aimed to improve the shopper's experience by utilizing object detection to provide additional information about products, making the shopping process more informative and engaging.