

WORK HISTORY

Intermediate Client-Side Developer

Oct 2023 – Present

Vectorface, Ottawa ON

- Spearheaded the development of innovative features in social gaming and slot games, contributing to the enhancement of user experiences.
- Addressed software issues promptly by applying effective bug fixes, ensuring the seamless functioning of gaming applications.
- Played a role in crafting a cutting-edge game engine tailored for casino games, showcasing a commitment to technological advancement and industry-leading solutions.
- Expanded the functionality of the PHP backend for the casino, introducing new features to elevate the platform's performance and usability.
- Facilitated the deployment of gaming applications to the production environment using Cloudflare and house-built Debian app servers, ensuring a smooth and successful launch for millions of users.
- Orchestrated the smooth transition from Node 16 to Node 18, managing and facilitating the update of framework versions to ensure optimal system compatibility and performance.
- Worked on the transition from JavaScript with Flow for static types to TypeScript, enhancing codebase robustness and maintainability.
- Drove the migration from React with Redux to Zustand for app state management, optimizing the efficiency of the application's architecture.
- Assembled captivating games utilizing the developed game engine and integrated game design tools, contributing to a diverse and engaging gaming portfolio.
- Implemented comprehensive documentation for processes and products using tools such as Joplin and GitLab, fostering clarity and knowledge sharing within the development team.

Tools used: React, TypeScript, JavaScript, MySQL, MariaDB, Docker, GitLab, PHP, Express.js, Node.js, Postman, Cypress, Mocha, Jest, Cloudflare, Debia.

Intermediate Software Developer

Nov 2021– Apr 2023

University of Ottawa, Department of Family Medicine, Ottawa ON

- Led the development of 6 Node and React based web applications that provided learning modules, seamlessly integrating them with a centralized platform and designing their microservice architecture.
- Managed the development of 3 VR applications, delivering immersive training experience for residents.
- Worked on bootstrapping and designing .NET Core resident management system with MSSQL.
- Utilized Docker to create optimized images for application deployment, ensuring efficient packaging and deployment.
- Implemented CI/CD using GitLab and GitHub Actions to automate the build, test, and deployment processes for multiple projects.
- Integrated CI/CD workflows with AWS and Azure cloud platforms, leveraging serverless services.
- Provisioned virtual servers to run the applications with EC2 Linux, while leveraging IAM for access management.
- Implemented CloudWatch for monitoring the applications' performance, ensuring optimal and timely issue detection.
- Introduced and implemented agile processes to bring structure to the development of the Innovation Portal apps.
- Designed the schema for the Innovation Portal's Microsoft SQL Server database, ensuring efficient data storage and retrieval.
- Implemented the database using Amazon RDS, optimizing performance, scalability, and data security.
- Developed and maintained a RESTful API that seamlessly communicates with an MSSQL database, ensuring efficient data management and retrieval.
- Successfully integrated Auth0 services into the microservices architecture, ensuring secure user authentication and authorization.
- Implemented Google Sign-On and Azure AD with Auth0, allowing users to sign in using their Google credentials, and enabling seamless authentication and single sign-on (SSO) for users.
- Mentored and oversaw a team of 15-20 interns, ensuring effective coordination and successful project execution.

Tools used: AWS, Azure, Docker, Node.js, Express.js, Cypress, Bootstrap, Postman, Selenium, MUI, SASS, SQL Server 2019, Auth0, React.js, React Native, Next.js, .NET Core 2.1, .NET 6.0, GitLab, GitHub, Artifacts, Confluence, Jira, Firebase, Unity VR, Meta Quest 2.

IT assistant and Webmaster

May 2019 – Nov 2021

University of Ottawa, Faculty of Law, Common Law section, Ottawa ON

- Worked closely with faculty members to understand their IT needs and provided customized solutions to enhance their productivity.
- Created custom Drupal pages tailored to faculty needs, including events, new departments, and feature enhancements.
- Updated and maintained the Drupal faculty website, ensuring accurate and timely information was reflected across all pages.
- Played a key role in the migration from Drupal 7 to Drupal 9 by implementing and migrating modules and pages.
- Managed and facilitated the update and maintenance of the faculty's IT system, ensuring smooth operation.
- Provided comprehensive IT support to faculty personnel and professors, troubleshooting hardware and software issues, and resolving technical problems promptly.
- Utilized Kace to efficiently manage and maintain all faculty devices, ensuring they were up to date and functioning properly.
- Employed tools such as Drupal, SQL, HTML, CSS, and JavaScript to enhance the functionality and design of the faculty website.
- Assisted in coordinating and executing faculty events, contributing to successful event planning and seamless technical support.

Tools used: Drupal, SQL, Kace, HTML, CSS, Javascript, Campaigner, Adobe Lightroom, Sony Vegas Pro, Office 365.

Product Development, Frontend Developer

May 2021 – Aug 2021

Mitel Networks, Ottawa ON

- Collaborated with development teams, working with both Angular and React apps to create new components.
- Successfully migrated the testing framework from Protractor to Cypress testing efficiency and reliability.
- Designed end-to-end (E2E) and unit tests for Angular components, ensuring code integrity and preventing regressions.
- Utilized JavaScript, TypeScript, HTML, and SCSS to develop high-quality front-end solutions that met project requirements.
- Actively participated in code reviews, providing feedback to ensure code quality and maintain best coding practices.

Tools used: Ionic, JavaScript, TypeScript, HTML, SASS, Postman, Selenium, Jest, StencilJS, Storybook, React, Angular, Cypress, GitHub.

Software Tester

Sep 2020 – Dec 2020

BlackBerry, Ottawa ON

- Actively participated in all aspects of software testing, collaborating with testers, developers, and project stakeholders.
- Designed and implemented manual test cases for BlackBerry Security Applications, ensuring comprehensive coverage and adherence to project specifications.
- Responsible for performing hands-on testing of new features to ensure product functionality is working according to specifications.
- Analyzed and reproduced complex problems within test environments based on test results and customer-reported inquiries.
- Utilized tools such as IIS (Internet Information Services) and Windows Server 2012 to create and manage testing dashboards, facilitating efficient testing processes.

Tools used: IIS, Windows Server 2012, Jira, Confluence, TestRail.

Localization QA Specialist

Jan 2020 – Apr 2020

OpenText, Ottawa ON

- Conducted Quality Assurance (QA) activities, including testing and verification of localized products to ensure accuracy and adherence to localization standards.
- Maintained documentation and generated reports for various aspects of project.
- Worked on scripting and parsing using Regex and Java, automating processes, and facilitating data manipulation.
- Utilized programming languages (Java, Python) to develop software solutions to improve productivity and enhance project outcomes.

Tools used: Java, Python, Secure Shell, Ruby, SDL Passolo

PROJECTS

Real-time systems project

- Led a team in the development of a real-time energy management system for solar panels using an Arduino-based platform.
- Utilized C++ within a Real-Time Operating System (RTOS) environment to ensure precise control and real-time responsiveness.
- Designed and implemented a comprehensive subsystem that monitored and controlled energy levels, activated or deactivated solar panels, and efficiently routed energy to designated destinations.
- Leveraged the Arduino Terminal for real-time monitoring of energy storage levels and usage statistics.
- Created extensive project documentation exceeding 200 pages, employing Doxygen to generate in-depth technical documentation.
- Successfully navigated through complex documentation and registers of the AM335x processor from Texas Instruments (TI) to configure header files and manage memory efficiently.
- Collaborated on the development of five crucial project modules, including the acquisition, ADC (Analog to Digital Converter), GPIO (General Purpose Input Output), and Cyclic Scheduler modules.
- Orchestrated the synchronization of all project modules by leading the development of the Cyclic Scheduler module.
- Demonstrated skills in low-level embedded system development within the challenging constraints of a real-time context.

Tools: C++, Arduino, AM335x processor (TI), CodeComposer Studio, Doxygen, BitBucket, Trello

CyberGlove

- Led a 12-month capstone project that culminated in the development of the CyberGlove, an innovative device designed to facilitate communication for individuals using ASL.
- Conceptualized and designed the CyberGlove to seamlessly translate ASL hand movements into spoken English, enabling ASL users to communicate effortlessly with those unfamiliar with sign language.
- Utilized an array of cutting-edge technologies and tools to bring the CyberGlove to life, demonstrating a multidisciplinary approach to engineering and problem-solving.
- Integrated ten flex sensors into the glove, employing Arduino microcontrollers to acquire precise data on hand gestures and movements. Designed and soldered a custom PCB to facilitate data transmission between the sensors and the Arduino.
- Incorporated an MPU 6050, a 3-axis gyroscope and accelerometer, to capture and analyze the hand's position and orientation, enhancing the accuracy of ASL translation.
- Established a seamless data communication pipeline using MQTT (Message Queuing Telemetry Transport) to transmit real-time sensor data from the glove to a central processing unit.
- The central processing unit, a Raspberry Pi, was equipped with a 5-inch LCD screen, speakers, and a microphone, forming the core of the translation system. Collaborated on Python-based software to interpret and translate incoming sensor data into coherent text.
- Integrated a text-to-speech API to enable the CyberGlove to audibly recite the translated messages, fostering effective communication between ASL users and non-signers.
- Implemented a microphone and leveraged a speech-to-text API to allow non-signing users to respond vocally, with their speech instantly converted to text on the same LCD screen.

Tools: Arduino, Raspberry Pi, MPU 6050, MQTT, Python, PCB Wiring, GCP Speech-to-Text API, GCP Text-to-Speech, GitHub.

ServiceProvo – Client-Service Provider Android App

- Designed and developed a feature-rich Android application using Java to bridge the gap between clients and service providers, facilitating seamless connections for services like plumbing and gardening.
- Leveraged Android Studio, Java, and XML to create an intuitive and visually appealing user interface, enhancing the overall user experience.
- Integrated Firebase for real-time data synchronization and user authentication, ensuring secure and efficient data management.
- Employed NoSQL databases to efficiently store and retrieve user and service-related information, contributing to the app's scalability.
- ServiceProvo represents a successful application of mobile app development, showcasing skills in Java, Android development, and database integration.

Tools: Android Studio, Java, XML, Firebase, NoSQL, GitHub

EDUCATION

University of Ottawa

2017 –2021

Ottawa, School of Electrical Engineering and Computer Science

- Bachelor of Applied Science in Computer Engineering, Cum Laude

EXTRAS

- Fluent in French, English, And Arabic
- EIT with 30 months of experience (passed the NPPE Exam).
- Reliability + Secret clearance holder.

REFERENCES

Available upon request.