Alexander Bhasin
Software Developer

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Education

Carleton University   Sept 2018 – April 2023
Bachelor of Computer Science, Honours Security Stream, High Distinction GPA 11.43/12.00   Ottawa, Ontario

Experience

Web Developer Co-op | `PHP` `JavaScript` `HTML/CSS` `WordPress`   Sept 2022 – Dec 2022
Bank of Canada   Ottawa, Ontario
- Contributed to improving the bank's fleet of 6+ websites using various technologies
- Championed the development of new accessibility features, improving the overall clarity of search functionality
- Ensured proper regression testing through the development of test cases and documentation
- Increased the flexibility of the development process by 25% through collaboration in an agile team

Software Developer Co-op | `Python` `Java` `Objective-C` `Android` `iOS`   Sept 2020 – Dec 2020
Paphus Solutions   Ottawa, Ontario
- Added NLP functionality to classification analytics in TensorFlow, increasing the capabilities of the analytics by 50%
- Modified user interfaces for Android applications, to provide a seamless user experience
- Migrated 4000+ lines of code written in Java to Objective-C to maintain iOS applications
- Integrated multiple APIs across various applications, resulting in an improved accuracy of calculated information

Projects

MoodyMix | `Svelte` `Python` `MongoDB` `Docker` `AWS`
- Created a web application that allows users to map songs to different emotions and share them online
- Designed the front-end using Svelte, with the back-end server making use of Flask and MongoDB
- Containerized the application using Docker, so that it can be easily deployed to AWS

AI Comedy Talkabot | `Python`
- Integrated TorToiSe TTS with GPT models to deliver a talking bot that emulates a famous comedian
- Built a tool that batch converts MP3 files to the required WAV file format for TorToiSe

Accessibility Applications | `JavaScript` `Python` `HTML/CSS`
- Designed a development tool to determine colours that meet the minimum contrast ratio requirements
- Developed a web scraper that evaluates the accessibility metrics of different websites
- Built a Python application that allows the user to upload PDF/docx files and have them converted into TTS
- Participated in the Microsoft AI for Accessibility competition, and designed a prototype using the OpenAI API

Embedded Software | `C` `C++` `QNX` `Qt`
- Developed embedded software for a fitness centre using QNX, equipped with a front-end for statistical analysis
- Programmed a simulator for a medical therapy device in C++, making use of the Qt framework

Skills

Languages: Python, Java, C, C++, JavaScript/TypeScript, PHP, HTML/CSS
Technologies: Node.js, Express, Flask, Svelte, Qt, MySQL, MongoDB, WordPress, Linux, QNX Neutrino
Developer Tools: Git, SVN, OpenAI/GPT, Jira, Docker, Kubernetes, Azure, AWS, VS Code, LaTeX
Concepts: Artificial Intelligence, Object Oriented Programming, Algorithms and Data Structures, Agile
Development/Modeling, CI/CD, W3C Accessibility Standards, Cryptography, RESTful Design, Cloud Native