

LinkedIn: khushalksingh
GitHub: parklicoste

Khushal Singh

(819) 230-0088
Khushalkumar0102@gmail.com

Education

Portfolio: khushalksingh.vercel.app

Ottawa, ON	Carleton University	Sept 2017 – May 2022
<ul style="list-style-type: none">BCS Honours, Computer and Internet Security Stream, minor in MathematicsMajor GPA: 9.81/12, Dean's Honour List 2022Leetcode 75 badge		

Technical Skills

Languages: C++, C, Java, Python, Objective-C, C#, JavaScript, XML, ReactJS, Shell Scripting

Technologies: Jenkins, Linux, Perforce, GitHub, TeamCity, JIRA, Docker, QT framework, Postman, Confluence

Databases: MongoDB, MySQL, NoSQL, SQL, PostgreSQL

Employment

Application Developer	Zamyx	Oct 2022 - Present
<ul style="list-style-type: none">Consulted on and led the development of complex software solutions, leveraging Python libraries and azure, to meet diverse client needs in a dynamic environment enhancing client satisfaction and operational efficiencyImplemented robust testing and quality assurance protocols using Pytest and Pylint, ensuring the delivery of high-quality software solutions in consulting projects, thus maintaining a reputation for excellenceActed as a key liaison between technical teams and non-technical stakeholders, effectively communicating complex concepts and progress updates, ensuring alignment with project goals and client expectationsImplemented the migration of a critical SQL database to Azure SQL, utilizing Azure Functions to automate data processing tasks. This project ensured high availability, improved scalability, and streamlined data workflows for our cloud-based applications. This resulted in 8% reduction in application loading times and a ~20% decrease in infrastructure costs compared to the on-premises solution.Facilitated workshops and training sessions for client teams, focusing on the adoption of Python-based applications, cloud migration strategies, and best practices in data management and security		
Software Engineer	Motorola Solutions	Jan 2021 – Oct 2022
<ul style="list-style-type: none">Worked on MDS configurator for VESTA 911 Emergency Call Handling Software to develop an algorithm that reduced data validation time from 50 minutes to 6 minutes (83% enhancement)Efficiently inserted, extracted, and modified data from a PostgreSQL database using PythonDeveloped test cases using C# and XML to validate the system before version upgrade deploymentsResolved 25+ security vulnerabilities during infrastructure health checks on different labsUsed Angular.ts and Material library to transform MDS user interface, reducing load time by 80% and improving user-friendlinessImplemented automated white-source scans within testing pipelines across 10+ projects on TeamCity platform to ensure compliance of software dependencies with US Federal Laws		
Software Infrastructure Developer	Ford Canada	Sept 2020 – Dec 2020
<ul style="list-style-type: none">Collaborated with ECG team consisting of 26 developers to update user profiles on BlackBerry's QNX infotainment software within Ford vehiclesCreated strategic unit test (UUT) cases for software functionality using C++, leveraging Google Test and Google Mock frameworks to achieve 100% code coverageDocumented designs, validated efficacy, and utilized Jenkins to address bugs in 10+ generated software buildsActively contributed to the iterative improvement of the infotainment system, focusing on code quality, system optimization, and user experience, thereby reinforcing the software's reliability and user satisfaction in a competitive automotive market		
Web Developer	Carleton University	June 2020 – Aug 2020
<ul style="list-style-type: none">Worked on the sWall project – a large interactive wall of screens showcasing the history, present activities, and success stories of the SCE Department to 4000 studentsWireframed the system through Balsamiq sketches and developed it using Vue.js and CSS BootstrapBuilt a Self-Assessment portal (CRUD app) where 4th-year engineering uploaded and received feedback on their capstone projectsLaunched a PyMongo-Flask application, using React.js for frontend and Python for backend, with		

MongoDB as the database; managed the exchange of data between frontend and backend using Axios API

PROJECTS

AceUni (Honours Project)	Carleton University	Jan 2022 – April 2022
---------------------------------	----------------------------	------------------------------

- Engineered a full-stack web application enabling Carleton University students to collaborate, access, and share course materials, leading to improved academic performance
- Modeled the system using entity relationship diagrams, use-case diagrams, and Balsamiq sketches
- Used Next.js on the frontend, Node.js on the backend, MongoDB as a database, and Multer middleware to simplify the file upload process
- Implemented a secure user authentication system using JWT-Json web tokens, generating unique tokens for each user upon sign-in
- Adopted advanced password hashing algorithms utilizing bcrypt and salted hashes; enhanced security measures and safeguarded user passwords in the MongoDB database, ensuring data integrity and privacy

Web-CAT (Containerized Automated Grading tool)	July 2023 – Sept 2023
---	------------------------------

- Installed docker in virtual machine and configured docker image for optimal performance, meeting the requirements of the Web-CAT application
- Deployed Web-CAT, within Docker by integrating Apache Tomcat Server with Java Version 8 and a MySQL database
- Collected data/Information from various platforms to successfully author a comprehensive installation and configuration guides on Medium.com, providing a valuable resource for others in the community
- Demonstrated effective communication skills by sharing detailed step-by-step instructions and command-line examples
- Published [textual](#) and [video](#) documentation showing the process on Medium.com and YouTube

Denas pain reliever (Team Project)	Carleton University	Jan 2020 – April 2020
---	----------------------------	------------------------------

- Worked in a team of 4 developers to develop a C++ software program using OOP, QT framework, and Agile programming methodologies to design and implement a user-friendly shock therapy medical device prototype
- Designed system architecture using UML diagrams and created traceability matrix and provided functionalities like depletion of battery with the time of usage
- Distributed project tasks and tracked team progress using GitHub's project management tools, ensuring efficient collaboration and seamless communication within the team

<u>Shopify Challenge Frontend</u>	May 2021
--	-----------------

- Built the web app using Next.js and Bootstrap to nominate 5 movies for a person by fetching data from the OMDB site through API (get requests)
- Provided functionalities like adding, disabling, buttons, and alerts so that users can nominate up to 5 movies at a time
- Deployed the app on Vercel app using GitHub's account

Interpersonal Skills

- Excellent communication skills, effectively conveying complex technical concepts to audiences with varying levels of technical expertise, while also fostering collaboration with teams to deliver projects successfully
- Solving Algorithms on [Leetcode](#) in my leisure time, 120 solved and counting
- Committed to continuous learning and application of complex algorithms, data structures, and mathematical problem-solving to address real-world challenges and enhance technical expertise.
- Actively learning new skills through courses on various platforms like OpenAI and YouTube, like Prompt Engineering using OpenAI's library, API in Python, and Building apps in NextJS and Tailwind.css
- Applied leadership and team management approach for COMP1405 Python Study Group, which resulted in a more cohesive and knowledgeable study group, contributing to improved academic performance and a deeper understanding of Python programming concepts among participants
- As Executive Coordinator at CASI (Carleton Association of Students from India), helped in event planning, prioritized tasks, and executed scheduling. Demonstrated good time management skills in overseeing successful events for 250+ attendees while coordinating and prompting issue resolution
- Enjoying various hobbies, including competitive indoor/outdoor sports (Badminton, Soccer, Chess, Table tennis, Gym), Reading books, learning new skills, travelling and exploring new places