Reezan Visram

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Technical Skills

Languages: Python, C, C++, TypeScript, JavaScript, Go, SQL, Bash scripting
Frameworks/Libraries: React, Node, Express, Flask, Django, requests, kivy, OpenGL, QT5
Tools: Git, Jira, Bitbucket, Redis, MySQL, Postgres, AWS, GCP, Docker, Visual Studio, PyCharm, VSCode

Experience

BlackBerry **Sept. 2022 – Dec. 2022**
Software Developer Intern – Co-op Waterloo, ON

- Developed backend cloud microservices and AWS Lambda functions using Python and Go, as part of the Endpoint Detection and Response team
- Created and implemented a new bulk GET API, increasing request bandwidth by over 50x
- Optimized an EQL to SQL translator library, reducing query times by over 90% and improving stability
- Demonstrated features in front of performance and testing teams, getting feedback and performance stats
- Wrote Python scripts to delete bad records from microservice caches thereby reducing costs in multiple regions
- Enhanced microservice and Lambda function logging to reduce noise and alert the team to issues earlier, leading to reduced cost and time savings
- Implemented cache statistics logging, allowing the team to identify bottlenecks and areas of cost-savings
- Deployed microservices to ephemeral, staging and production AWS environments using Jenkins
- Wrote initial deployment smoke tests to ensure that microservices were configured properly before deployment, saving time and resources if build was misconfigured
- Updated tickets in Jira daily with progress and status of issues that were assigned
- Reviewed code written by team members in Bitbucket, and gave approval for pull requests to be merged, ensuring high code quality

Tools: Python, Go, Docker, EQL, Redis, MySQL, AWS, Git, Jira, Bitbucket, Jenkins

Red Thread Innovations **Jan. 2022 – Apr. 2022**
Software Engineering Intern – Co-op Toronto, ON

- Developed a full-stack web dashboard for 10+ customers to seamlessly manage their applications, using React, TypeScript, Express and Postgres
- Wrote unit, integration, and component tests, using Jest and achieved 99% code coverage, ensuring new features integrated seamlessly with the existing codebase
- Containerized applications using Docker and deployed to AWS using configured Bitbucket pipelines
- Updated tickets in Jira daily to organize 2-week sprints and keep track of sprint metrics
- Designed and implemented a full database schema and defined the relationship between tables in Postgres
- Volunteered to lead end-of-sprint ceremonies such as review and retrospective, leading to increased team velocity and quality of deliverables

Tools: TypeScript (React, Node, Express), Postgres, Docker, Git, Jest, AWS, Jira, Bitbucket

Education

University of Waterloo Sept. 2021 – Present
Bachelor of Applied Science in Computer Engineering, Co-op Waterloo, ON

Portfolio of Projects

3D Chess | C++, OpenGL
- Developed a 3D player-vs-player chess game
- Imported chess set models into the game using the Assimp library
- Implemented ray-sphere and object-bounding box collision testing to enable 3D object picking

TypeR | TypeScript (React, Node, Express, TypeORM), Python (requests), MySQL, Docker, Bash
- Developed a scraper to fetch and store data on over 3500 keyboard components from 4 different retailers
- Implemented a REST API with Express, Node and MySQL, to supply data to the React frontend
- Created a recommendation system that guides users on the best time to buy components

NHL Simulation | Python (requests, kivy)
- Developed a simulation of an NHL season using data on over 600 players from the NHL API
- Wrote multiple algorithms to accurately determine the outcomes of over 200 in-game situations
- Created a Graphical User Interface using kivy, allowing the user to view key information

Fractal Visualizer | C++, OpenGL
- Developed a Fractal Visualization application
- Wrote various vertex and fragment shaders in GLSL
- Optimized a Mandelbrot Set drawing algorithm, leading to a depth of 5000 iterations at 60fps
- Allowed customization of fractals using a GUI made with Dear ImGui

Morse Code Teaching Device | C, STM32 Nucleo Microcontroller
- Created a device to teach the user how to read, listen to and write morse code
- Used a microcontroller to interface with various electronic components to enable user input and device output
- Wrote a design document using LaTeX, detailing the design process

PillsOnWheels | JavaScript (React Native), Python (Flask), SQLite
- Developed an Android App for users to manage their prescriptions, and order them for delivery
- Created a backend REST API using Python and SQLite, hosted on Heroku
- Wrote over 15 custom React components for user interactions
- Deployed the application on the Google Play Store

Pharmaceutica | C#, Unity Game Engine
- Developed a game where the user controls a pharmaceutical company developing a COVID-19 vaccine
- Used C# and Unity to develop the core gameplay, as well as the User Interface and extra minigames

Complete Crisis Coverage | HTML, Bootstrap, Python (requests, Flask), MySQL
- Developed a website where a user can see COVID-19 statistics from every country in the world
- Used requests to get COVID-19 statistics from the global COVID-19 REST API
- Used Flask and MySQL to create a backend REST API to serve statistics, as well as user-written stories about their experiences with COVID-19

Arduino Information Display | Arduino
- Created a heads up display using an Arduino that shows the date, time, humidity, and temperature using data from various electronic sensors connected via a breadboard
- Displayed data using a 16x2 Hitachi LCD
- Added support for infrared remote control, allowing the user to toggle between different display modes with an infrared remote control