Hazafa Tanveer

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TECHNICAL SKILLS

Languages: C++, Python, Rust, SQL, Bash, Java, Javascript, HTML/CSS, YAML
Frameworks: FAST, Svelte, Tailwind
Developer Tools: WinDbg, Jenkins, Ansible, AWS, RedHat Openshift, Kubernetes, Docker, DBeaver

EXPERIENCE

Software Engineer Intern   May. 2024 – Aug. 2024
Microsoft   *Redmond, WA, USA*

- Engineered a provisioning solution that allowed users to bypass configuration steps of the Windows 365 Link device, reducing setup time by 90%.
- Developed an automatic detection mechanism for provisioning packages on USB, aiding in dramatically reducing the Windows 365 Link setup time.
- Created a user-friendly UI for Link device provisioning, ensuring accessibility for visually impaired users through ARIA integration.

Software Engineer Intern   Jan. 2024 – Apr. 2024
Royal Bank of Canada   *Toronto, ON, Canada*

- Supported project test activities and quality engineering practices, contributing to a 15% increase in testing efficiency through active participation in planning and execution phases.
- Aided in the development and maintenance of the test automation pipeline, resulting in a 20% improvement in automation coverage by creating and executing test cases under supervision.

Thesis Researcher - IoT Software Security   Aug. 2023 – Apr. 2024
Toronto Metropolitan University   *Toronto, ON, Canada*

- Performed research on IoT security specifically Amazon's Alexa platform, identifying and documenting critical vulnerabilities and challenges; instrumental in enhancing security protocols and measures to fortify the IoT ecosystem.
- Analyzed and documented IoT device behaviors, data traffic, and security vulnerabilities through systematic data collection efforts, enabling the development of robust strategies to mitigate risks.

DevOps Engineer Intern   May. 2022 – Aug. 2023
IBM   *Markham, ON, Canada*

- Streamlined essential service installations for regression machines by developing and implementing Ansible playbooks; achieved significant time savings of 20+ hours per week, enhanced platform capabilities, and increased operational efficiency, ensuring uninterrupted functionality.
- Improved infrastructure tooling to facilitate smooth build production and test execution; achieved a 25% reduction in release cycle time, accelerating the delivery of software updates to end-users.

PROJECTS

Rusty Tracer | *Rust*

- Developed a cutting-edge CPU-based ray tracer in Rust, enabling rapid rendering of highly intricate textures, shapes, meshes, and lighting effects, achieving exceptional processing speeds.
- Employed parallel programming techniques to harness the power of multithreading, distributing computations across CPU threads. This optimization led to a substantial performance increase ranging from 400% to 600%.
- Implemented and optimized advanced rendering features, including Specular and Diffuse Reflections, Refractions, Highlights, Diffuse Global Illumination, Volumetrics, and Emissive Textures; resulting in visually stunning and lifelike visual effects that captivated users.

EDUCATION

Toronto Metropolitan University (Formerly Ryerson University)   Toronto, ON
Bachelor of Science in Computer Science   *Sept. 2020 – May. 2025*