

Shakeel Farooq

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EDUCATION: Rochester Institute of Technology

Bachelor of Science in Computer Science

GPA: 3.85

Honors: Dean's List Student (2018-2022), Summa Cum Laude

Rochester, NY

Aug 2018 - Dec 2022

EXPERIENCE:

Software Development Engineer | Amazon Web Services (AWS)

Feb 2023 - Apr 2024

- Led and implemented an encryption-at-rest design when storing customer private keys on disk improving security and resiliency properties of the system. Written in Rust and Java
- Streamlined adhoc environments to enable synchronous development testing during CI/CD releases to production
- Contributed to operational region expansion for our service, facilitating seamless integration of systems and processes to support growing business demands.
- Redesigned our continuous integration of unowned software dependency updates into our application reducing manual action and reducing the likelihood of build failures
- Demonstrated expertise in diagnosing and resolving complex technical issues under pressure during on-call rotation, resulting in minimal downtime and uninterrupted service delivery, enhancing customer satisfaction
- Implemented proactive measures to mitigate potential failures and improve system resilience, resulting in enhanced stability

Software Development Engineer Intern | Amazon Web Services (AWS)

Jun 2022 - Aug 2022

- Implemented recommendation algorithms that save user's time in discovering the best TLS policies from a few hours to under a minute
- Designed and implemented a CLI in Java, used by internal Amazon services to recommend TLS policies for their Load Balancer. Data fetched from AWS API to determine recommendation. Unit tested thoroughly using Mockito

Software Engineer Co-op | Paychex

Jun 2021 - May 2022

- Designed and developed an internal web application within an Agile/Scrum team employing Angular and TypeScript to create a dynamic and intuitive frontend interface, enhancing user experience and productivity within the organization.
- Architected and implemented the backend infrastructure of the web application using C# and .NET, ensuring seamless integration with Paychex's internal database systems for efficient data processing and retrieval.
- Established a robust communication pipeline between the backend and CosmosDB, leveraging Flask REST APIs to facilitate data transmission and manipulation, thereby enhancing the application's responsiveness and scalability.
- Managed the deployment and hosting of the web application on Microsoft Azure, leveraging cloud-based infrastructure to ensure high availability and scalability of the system.
- Proactively identified security vulnerabilities of third-party dependencies within Paychex's organization-wide infrastructure to mitigate potential risks and ensure the integrity and confidentiality of sensitive data.
- Implemented software composition analysis (SCA) for all cross-functional teams' codebases, enabling comprehensive identification and mitigation of security risks associated with third-party libraries and dependencies.

PROJECTS:

Poison Ivy Detector:

- Implemented machine learning models to automate the identification process, achieving high levels of accuracy in distinguishing poison ivy from non-toxic vegetation
- Utilized advanced feature extraction techniques such as K-means to discern unique characteristics of poison ivy, enabling accurate classification of new data instances.

Raft Protocol:

- Developed and implemented the Raft consensus protocol in Java, leveraging Docker containers for scalable and isolated testing environments.

MIST Network Graphs:

- Developed an interactive web application for visualizing and analyzing network graphs, utilizing D3.js, Javascript, and static HTML/CSS. Available to view on my website.
- Provided detailed tooltips and interactive elements to enhance data exploration and user engagement.

SKILLS:

Programming Languages: Java, Python, C/C++, C#, Rust, SQL, NoSQL, Javascript, Node.js, HTML/CSS, MatLab, Ruby

Frameworks/Tools: AWS, Azure, Git, .NET, Angular, Flask, Docker, Gradle, Spring Boot, Agile/Scrum