Sahil Hamal

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💼 Work Experience

Software Engineer II, American Express · 06/2023 – present | Washington, DC
- **Optimized Analytics Dashboard:** Streamlined event creation and enhanced user interaction, improving efficiency by **30%**.
- **Scalable Backend Development:** Designed and optimized backend APIs to handle millions of data points in real time, ensuring secure and seamless frontend integration.
- **Advanced Search Optimization:** Reduced search **latency by 40%** through effective use of Redis caching and ElasticSearch indexing.
- **Efficient Data Management:** Engineered file upload processes and integrated CDNs for optimal data storage and rapid access.
- **Technologies Utilized:** React, Java, Spring Boot, Redis, NoSQL, Docker, JavaScript, ElasticSearch, and Kafka.

Full Stack Developer Intern, Zoom Video Communications · 05/2022 – 08/2022 | San Jose, CA
- Developed a **full-stack video archive application** to upload, search, and play Zoom Event videos.
- Created a **tag-based video search & sorting system** with ElasticSearch, AWS, and MongoDB.
- Technologies: React, Java, Spring Boot, Docker, JavaScript, TypeScript, AWS, ElasticSearch, MongoDB.

Software Engineer, Johns Hopkins University · 10/2019 – 06/2021 | Baltimore, MD
- Created a full-stack cell-view application in collaboration with JHU immunologists to analyze cell samples, draw annotations and cancer detection and successfully secured funding for at least 5 years
- Technologies: Java, Docker, Kubernetes, Python, OpenLayers, VueJS, JavaScript, TypeScript

Software Engineer, Deutsche Bank · 06/2018 – 10/2019 | Cary, NC
- Created an application that streamlined the process of tracking various communication applications and their dependencies, enabling the user to be notified when any of the dependent application was being updated or had planned update which aided in avoiding unexpected application failures and compatibility issues
- Assisted with an automated deployment process of financial applications to secured servers using Ansible scripts
- Technologies: Angular, Java, SQL, Jira, Rest API, Ansible

Software Developer Intern, PricewaterhouseCoopers · 06/2017 – 07/2017 | Dallas, TX
- Developed an application for PwC Tax & Technology division to improve the financial account management by utilizing user feedbacks and adding functionalities such as report generation and reducing redundant actions
- Technologies: MVC5, TFS, C#, SQL

Software Engineer Intern, General Electric · 06/2016 – 07/2016 | New Orleans, LA
- Developed a new application that visualized and notified the team about the status of different code commits based on the CI/CD deployment, which expedited issues identification and led to faster code fixes
- Technologies: GE Predix Frame, JS, jQuery

🎓 Education

Masters in Computer Science, Virginia Tech · 08/2021 – 05/2023
Thesis: Interpreting Dimension Reductions through Gradient Visualization (Explainable AI)

Bachelors in Computer Science, Troy University · 08/2014 – 05/2018
Graduated with summa cum laude

🧠 Skills

React | Java | Spring Boot | Javascript | Vuejs | SQL | AWS | No SQL | ElasticSearch | MongoDB

🎓 College Experiences

Outstanding Graduate Research Award, Virginia Tech · 2023
- Recognized for **"Interpreting Dimension Reductions through Gradient Visualization (Explainable AI)"**.

Hackathon Winner, Georgia State University · 04/2016
- Created an app using Java, XML and android studio that enabled a phone to emulate a shipping package to track the motion and shock on the package using accelerometers which helped to detect any sudden movements in x, y, z axis and record the location to inform sender and receiver about the potential cause http://devpost.com/software/shock-detector ⤴
- Awarded an internship with General Electric (GE Digital)