Srinivas Charan Madu

Seattle | 1-206-6975021 | srinivascharanmadu@gmail.com
linkedin.com/in/charan999 | github.com/Charan000

EDUCATION

UNIVERSITY OF WASHINGTON, SEATTLE   Seattle, USA
MS in Information Management - Data Science   *Expected Graduation: 1st August 2024*

INTERNATIONAL INSTITUTE OF INFORMATION TECHNOLOGY, BANGALORE (IIITB)   Bangalore, India
Integrated Masters in Computer Science and Engineering

WORK EXPERIENCE

MICROSOFT   Hyderabad, India
Software Engineer   *Aug 2020 - Aug 2023*
- Developed features of **Azure Backup**, a highly scalable consumer facing Azure service protecting Azure resources, and worked on optimization of backend workflows across its microservices using **.NET** and **C#**.
- Designed and developed **Multi-user authorization** feature for Azure Backup to protect 8 critical scenarios, safeguarding over **2500 backup vaults** across nearly **500 subscriptions** against ransomware attacks.
- Implemented **Preflight validation** for the deployment templates of 4 Azure Backup resources, and **reduced failure rate** of their deployment due to incorrect input and compliance issues by **92%**.
- Optimized the **Configure backup** operation for IaaS virtual machines with Recovery Services Vault by identifying and resolving inter-service sync and multi-threading issues, which **reduced the failure rate by 82%**.
- Enhanced the efficiency of the Rollover process of auth certificates of containers and implemented cleanup **automation** of dangling certificates, **eliminating 3 days** of effort of the Ops team to rotate over **100 certificates every month**.

IIITB INNOVATION CENTRE   Bangalore, India
Product Development Intern   *Jan 2020 - Jun 2020*
- Conducted market research and **customer discovery** process through **75 interviews** and constructed a business model for Raydius - a map based digital platform to discover and share the happenings of a neighborhood.
- Developed an MVP for Raydius, a mobile application using **React Native** and **Google Cloud Firestore**.
- Validated the customer adoption in Bangalore and identified **4** types of use cases as **primary verticals** by communicating with **non-technical consumers**, which helped later teams to select those verticals as focus to improve user experience.

SKILLS

Programming/Tools: C++, Java, Python, C#, R, JavaScript, Jupyter, PyCharm, Git, Postman, Tableau, Swagger
Frameworks/Libraries: .NET, JDK, OpenGL, D3.js, React Native, Node.js, React, NumPy, Tensorflow, PyTorch, Matplotlib
Concepts/Technologies: RESTful APIs, Software Engineering, Backend Development, CI/CD, Azure, MySQL, NoSQL

PROJECTS

Agent based modeling of Drug Resistant Diseases
- Developed a sophisticated **Agent-Based model** in **Python**, Java, and Repast City framework to simulate **drug resistance** onset in tuberculosis, modeling disease spread within a constrained environment.
- Achieved efficient simulations of **100 human agents** over **2000 years** within a **6.5-hour** real-life run-time, providing data-driven insights into the dynamics of drug-resistant diseases.

Telecommunication Spectrum Data Visualization
- Integrated run-time **D3.js** based visualizations of the dense Indian telecom spectrum data to a web portal.
- Built a continuous deployment pipeline (**CDP**) using **Jenkins**, **Docker**, **Apache Spark**, and **AWS** to enable team collaboration for the development of the website.

LEADERSHIP AND ACHIEVEMENTS

- **Lead Technologies Administrator of ASUW** at the University of Washington, leading a team of 2 developers to develop and maintain the websites, database, servers, and tech support.
- **Institute Gold Medal** for the All-Rounder of the graduating batch of 2020, awarded by IIITB, for exceptional all-round activities like academics, community, and organization.
- **Elected President of the Student Activity Council** at IIITB from 2016 to 2017, organized events in the campus, acted as the POC for inter-university and alumni communications, managed in-campus club activities and funds.