Sarvesh Sundaram

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Passionate and innovative software engineer - experienced in database design/management, REST API development, AWS resource management/deployment, ML and AI, and scrum methodology. Adept at learning new technologies on the job and strong team player.

Education

RENSSELAER POLYTECHNIC INSTITUTE (RPI)

B.S. Computer Science (Concentration in Machine Learning & Data) - GPA 3.87/4.00   Expected 2025

Relevant Coursework: *Intro to Algorithms, Principals of Software, Programming Languages, Operating Systems, Computational Vision, Intro to ML, Database Systems, Modern Binary Exploitation, Intro to Information Technology and Web Science, Linear Algebra, Engineering Probability, Intro to Differential Equations, Multivariable Calculus*

Experience

THE CIGNA GROUP

AI Software Engineer Intern   September 2023 – Present
- Part-Time Intern September 2023 – May 2024; August 2024 – Present. Summer Intern May 2024 – August 2024
- Refactored Python Text-to-SQL algorithm an Object-Relational Mapping library to provide schema enforcement on Neo4j knowledge graph, enabling CICD for the enterprise context database used for multiple internal GenAI applications
- Developed UI over relational metadata in Neo4j and deployed to Elastic Kubernetes Service, optimizing performance by eliminating need for Cypher Querying Language, saving ~$2400 annually by providing read-only Role-Based Access Control
- Developed DAG in AWS MWAA to perform stress tests to evaluate ability to connect with services such as Redis and Oracle, expanding connectivity by 77% and substantially improving an environment used by 20+ engineers
- Developed Python LLM-powered SQL Analytics Algorithm to extract data on join conditions in PySpark and Teradata SQL files and ingest into Neo4j knowledge graph databases using Cypher and Kubernetes
- Implementing the capture of 2623 stored procedures, 10582 SQL statements, and 77378 join conditions, that will be used as metadata for enterprise-wide text-to-SQL algorithm to improve join condition generation ability

Software Engineer Intern   May 2023 – August 2023
- Created POC using PySpark to clean and transfer customer call data from 50+ S3 buckets to Databricks Delta Tables as part of call analytics pipeline, providing schema enforcement and optimizing data parsing for analytics programs
- Refactored customer data management stored procedures from Teradata SQL to PySpark/SparkSQL Databricks procedures, decreasing ETL process costs by 21% as part of company-wide cloud data transfer

COGNITIVE AND IMMERSIVE SYSTEMS LAB

Undergraduate Researcher   May 2022 – August 2022
- Refactored a human-machine communication interface from IBM Watson to Google Cloud systems to efficiently automate interaction by reading verbal cues and generating audio response. Used in multiple lab projects such as an AR game to learn Mandarin

Projects

MyCity
- Served as back-end lead and database administrator for patent-pending internal networking application
- Spearheaded design and management of a DynamoDB instance and led 5+ interns in development of REST API using typescript in AWS Lambda, creating cloud-native backend with less than $1000 estimated yearly costs
- Led the integration of API endpoints with 10+ web pages using Next.js, enabling full end-to-end functionality and enhancing UX/UI
- Presented product with team in company-wide presentation, with positive feedback on implementation of back-end from judges

Video Analysis Pipeline
- Implemented classifier convolutional neural network and data cleaning pipeline using OpenCV and PyTorch with 88% accuracy rate and average loss of 0.41 to identify if surgical procedures were successful for student assessments
- Expected to be used in research project and potential paper as part of joint study between RPI and University of Buffalo

Leadership/Honors

Leadership: Learning Assistant Coordinator, counselor to 50+ freshmen, providing academic guidance during transition to college, manages team of 10+ LA's, and recorded 60% decrease in alerts during high-stress periods
Honors: RPI Leadership Scholarship, covering 40% of tuition, given to 10% of accepted students; Dean's Honor List, Fall 2021 - Present

Skills/Interests

Languages: Python, Java, C++, C, HTML/CSS, JavaScript, SQL, Typescript
Frameworks/Tools: Git, React, Next.js, PHP, Express, PySpark, PyTorch, OpenCV, Numpy, Teradata, Databricks, AWS, Azure, MongoDB
Interests: Digital Art, Animation, 3D Modeling, Hiking, Skiing, Community Service