Krishna Deep Yerramallu

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Education

Stevens Institute Of Technology **New Jersey, USA**
Masters of Sciences in Computer Science *Aug. 2024 – Present*

Experience

Data Engineer / Business Analyst **August 2022 – August 2024**
Silicon Labs *Hyderabad, Telangana*

- Developed a diverse set of Python and Go scripts to facilitate data collection through Robotic Process Automation (RPA) and streamline data orchestration processes reducing human intervention by more than 75%.
- Created SQL scripts and integrated advanced design patterns to optimize data processing, data movement and data retrieval, resulting in a significant reduction in egress costs by 39% from 2023 to 2024.
- Contributed in data warehousing efforts by overseeing the collection, storage, and efficient retrieval of data while maintaining a strong focus on data accuracy and reliability.
- As part of a comprehensive cloud migration project, successfully transitioned legacy applications, data sources, and reports from their original on-premises environments to the cloud.
- Collaborated closely with multiple departments to pinpoint essential key performance indicators (KPIs) and craft visualization dashboards, empowering teams to efficiently track and manage their performance.
- Developed business intelligence solutions, encompassing dynamic dashboards and comprehensive reports, by leveraging tools like Tableau and Power BI.

Undergraduate Research Intern **January 2020 – January 2022**
Keshav Memorial Institute Of Technology *Hyderabad, Telangana*

- Played a significant role in early-stage breast cancer detection, utilizing machine learning and deep learning. This includes developing APIs for estrogen receptor detection, implementing deep learning for tubule segmentation on large whole-slide images as part of the Allred Scoring system, and contributing to related research papers.
- The APIs are currently utilized by diagnostic centers to assist pathologists in completing tissue annotations and grading, increasing the efficiency by more than 80%.
- Incorporated storage and computing clusters into an AI infrastructure framework using Docker-Swarm, HistomicksTK.

Publications

- Deep Learning Model for Enhanced Nottingham Grading of Breast Cancer on Whole Slide Images (WSI) to Achieve Superior Diagnostic Precision and Efficiency. (Primary focus: Tubule Segmentation) (Scopous, Under Review).

Technical Skills

Languages: Java, Python, C/C++, Go, Scala, SQL **Cloud Technologies:** Azure, Azure Data Factory, AWS, EC2, S3
Visualizations Technologies: Tableau, Power BI **Operating Systems:** Linux, Mac OS, Windows
Other Technologies: Docker, Kubernetes, Kafka, Spark, Git, GraphQL, Jenkins, Snowflake

Projects

Data Warehousing and Data Engineering | *Azure, PowerShell, Python, Tableau, Power BI* **August 2022 - July 2024**

- The primary objective of this project is to design, implement, and manage a data warehousing solution in Azure to store and analyze the organization's data. Additionally, it involves migrating existing data from on-premises or other cloud platforms to Azure Data Warehouse.
- Designed the database and sophisticated design patterns for the Azure Data Warehouse, including tables, views, indexes, stored procedures. Optimized data storage and query performance. Used JAMS Scheduler and python in coordination for analytics and orchestration.

SPYder - Hexapod Robot | *Python, Arduino, Raspberry Pi, Deep Learning, Object Detection* **February 2020**

- An arachnid-inspired 8-legged robot designed for navigating tight and confined spaces with agility and adaptability.
- The robot can ascend to heights of 10 centimeters with precision, detect obstacles during its ascent, and adjust its path accordingly. Contributed in Object detection (Machine Learning), Obstacle avoidance, Coordination code. Reference.

Leadership / Extracurricular

Recurse - The Technical Club **September 2020 – July 2022**
Head of the Club *Keshav Memorial Institute Of Technology*

- Conducted a wide range of events, including workshops, hackathons, alumni lectures, and national-level coding competitions, to provide participants with a holistic exposure to the corporate world.
- Worked on Kinect360, DJI Drone, Ardupilot Drone, Raspberry Pi, Arduino, Humanoid Robot as a club.