

KRISHNA DEEP YERRAMALLU

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Education

Stevens Institute Of Technology

Masters of Science in Computer Science

Hoboken, New Jersey

Expected Graduation: December 2025

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 RPA, ETL and streamline data orchestration processes reducing human intervention by more than 75%.
- Created SQL scripts and applied advanced design patterns to enhance data processing, movement, and retrieval, achieving a 39% reduction in Azure egress costs from 2023 to 2024 as part of data warehousing initiatives.
- Migrated legacy applications, data sources, and reports from on-premises environments to the cloud as part of a comprehensive cloud migration project.
- 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 using Tableau, Power BI.

Research Assistant - Deep Learning and Machine Learning

January 2020 - January 2022

Keshav Memorial Institute Of Technology

Hyderabad, Telangana

- Contributed to early-stage Breast Cancer Detection by developing Machine Learning and Deep Learning solutions for Estrogen - Progesterone Receptor Detection and Deep Learning Models for Tubule Segmentation in whole-slide images, aiding the Allred Scoring system.
- Developed API that are now actively used by diagnostic centers, assisting pathologists in tissue annotation and grading, improving workflow efficiency by over 80%.

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) (Scopus, Under Review).

Technical Skills

Languages: Java, Python, C/C++, Go, Scala, SQL **Cloud Technologies:** Azure, Azure Data Factory, AWS

Visualizations Technologies: Tableau, Power BI **Operating Systems:** Linux, Mac OS, Windows

Other Technologies: Docker, Kubernetes, Kafka, Spark, Git, GraphQL, Jenkins, Snowflake, CI/CD

Projects

Database Synchronization | *Python, Go, SQL, Azure, AWS, Cron, Apache Airflow*

August 2024 - Present

- Implemented a data synchronization and replication solution using Change Data Capture (CDC) to replicate cloud-hosted SQL tables (extendable to on-premise) to an on-premise SQL Server, reducing egress costs by 40% while maintaining data consistency.
- Leveraged SQL Server Agent Jobs, SQL Triggers, Cron Jobs for automated scheduling, Python / Go for manipulation and extraction, and optimized transfer by capturing only modified rows, resulting in a 25% reduction in data transfer volume.

Data Warehousing 4.0 | *Azure, PowerShell, Python, Tableau, Power BI*

August 2022 - July 2024

- Collaborated the design, modeling, implementation, and management of a data warehousing solution using Azure SQL Database to store and analyze organizational data, while overseeing the migration, validation of existing data from on-premises and other cloud platforms to Azure SQL Data Warehouse for optimized performance and scalability.
- Designed and implemented the database architecture and advanced SQL design patterns for Azure Data Warehouse, optimizing data manipulation, storage, and query performance through tables, views, indexes, and stored procedures.
- Automated data pipelines and integrated analytics orchestration using JAMS Scheduler, Python and multithreading techniques, ensuring scalability, data integrity, and high availability for large-scale data processing.