

# 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*

### Jawaharlal Nehru Technology University

*Bachelor of Technology in Computer Science and Engineering*

Hyderabad, India

*Graduation: August 2022*

## Experience

### Data Engineer / Data 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** involving **SQL, Kafka, Spark** etc.
- 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, 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

### Net-Sieve | Python, PostgreSQL, Docker

November 2024 - Present

- DNS server that **re-routes tracking and malicious domains** to a "black hole", **preventing devices from connecting to unwanted servers and enhancing security network wide** from a tailored block-list in postgres.
- Developed functionality to **resolve local devices IP and name mappings**, ensuring efficient and accurate **resolution for intranet and home networks**.
- Currently working on **real-time monitoring, analytics, web based block-list and server manager**.

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

August 2022 - July 2024

- Collaborated in **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**.