

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

Silicon Labs

August 2022 – August 2024

Hyderabad, Telangana

- Developed and implemented a diverse set of **Python and Go scripts** as part of software development efforts 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 **Python, 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

Keshav Memorial Institute Of Technology

January 2020 - January 2022

Hyderabad, Telangana

- Contributed to early-stage **Breast Cancer Detection** by developing **Machine Learning and Deep Learning solutions for Estrogen - Progesterone Receptor Detection** and **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

Certifications: AWS Cloud Practitioner (On-Going), AWS Solutions Architect (On-Going)

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

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

Projects

Net-Sieve | *Python, PostgreSQL, Docker*

November 2024 - December 2024

- 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 seamless **resolution for intranet and home networks**, improving device management and connectivity.
- Implemented a **web-based block-list for the server**, enabling easier management and **updates of the block-list through a user-friendly interface**, enhancing security and accessibility.

EnvKeyVault | *Vercel, React, Cryptography, Redis, Typescript, REST*

November 2024 - January 2025

- Encrypt environment variables** directly in the browser using **AES-GCM** encryption and share. Only encrypted data are sent and stored in the **redis database**, ensuring sensitive variables such as API keys or credentials remain secure.
- Share sensitive data with specific limits on the number of reads (e.g., single-use or unlimited) and optional **Time-to-Live (TTL) for automatic deletion**, ensuring temporary and secure sharing.
- The solution includes an **API for securely sharing** and retrieving environment variables directly from the terminal using **CURL**, making it ideal for developers to **integrate into CI/CD pipelines or other automated workflows**.