

KRISHNA DEEP YERRAMALLU

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Education

Stevens Institute Of Technology

Masters of Science in Computer Science

Hoboken, New Jersey

Expected Graduation: August 2025

Jawaharlal Nehru Technological University

Bachelor of Technology in Computer Science and Engineering

Hyderabad, India

Graduation: August 2022

Experience

Data Engineer / Analyst - Cloud

August 2022 – August 2024

Silicon Labs

Hyderabad, India

- Architected scalable data pipelines in **Azure Data Factory** using **Python** scripts for **RPA, ETL** and streamline **data orchestration**, **reducing human intervention by more than 75%**.
- Optimized data processing and retrieval using **Advanced SQL design patterns** like **Change Data Capture (CDC)** etc., **reducing Azure egress costs by 39%** from 2023 to 2024.
- Migrated 200+ legacy applications, data sources, and reports to the cloud using **Python, SQL, Kafka**, and **Spark**, as part of a **cloud migration project**, resulting in a **50% reduction in report generation time**.
- Implemented **automated data quality checks** using **Python, SQL** and **cron jobs**, ensuring **99.9% data accuracy** between cloud and legacy systems and **improving stakeholder confidence** in cloud reporting systems.

Research Assistant - Machine Learning and Deep Learning

January 2020 - January 2022

Keshav Memorial Institute Of Technology

Hyderabad, India

- 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%**.

Technical Skills

Languages: Java, Python, C/C++, Go, Scala, SQL

AWS Services: EKS, EC2, RDS, IAM, Lambda, S3, ElasticCache, MSK

Azure Services: Data Factory, Virtual Machine, SQL Database, Functions, Blob Storage

DevOps: Docker, Kubernetes, Git, Jenkins, CI/CD, Linux

Data Processing: Kafka, Spark, Snowflake, MySQL, GraphQL

Visualization: Tableau, PowerBI

Publications & Achievements

- DCS_PathIMS: AI powered Digital Pathology Diagnostics Platform for Breast Cancer Histology Imaging Biomarker Discovery for Precision Oncology [link](#)
- Awarded the “**Most Innovative Hack**” at Stevens QuackHacks 2025.
- Received the “**Best Club Head of 2022**” award at KMIT, for hosting Sophos, National level coding competition.

Projects

Code-Explainer | *Python, LLMs, GitHub, RAG, Google GenAI API*

March 2025 - April 2025

- Leveraged **LLM-Powered Semantic Code Analysis** to crawl **GitHub repositories** into architectural blueprints and **interaction maps** using advanced **NLP techniques**.
- Developed **Multimodal Tutorial Generation** with generative AI to produce **chapter-wise guides**, **concept diagrams**, and **visual learning paths** for code understanding.
- Built **Neural Code Graph Embeddings** to visualize **distributed code components**, **connection graphs** and **inter-module links** using **GNNs** and **attention-based models**.

Design Win Success Prediction & Optimization | *Azure, AWS, SQL, Python, Tableau*

August 2022 - July 2024

- Developed machine learning models using **XGBoost and Scikit-Learn**, predicting **Design Win success** based on **technical features**, **customer profile**, and historical sales trends, **increasing forecasting accuracy by 19%**.
- Optimized data cleaning and validation workflows, ensuring high-quality input for **predictive analytics**, **reducing missing and inconsistent records by 30%**.
- Built automated data pipelines integrating **SQL, Python**, and **cloud services (AWS/Azure)**, **reducing manual intervention in data processing by 75%**, enabling faster insights for sales and product teams.