

Teja Swaroop Sayya

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EDUCATION

Masters of Science, Computer Science

May 2025

University of North Carolina at Charlotte | GPA: 4.0/4.0

Bachelors of Technology, Computer Science

June 2021

Jawaharlal Nehru Technological University | CGPA: 9/10

PROFESSIONAL EXPERIENCE

Open Source Developer

June 2023 - Present

- Collaborating on backend improvements for Rocket.Chat and FitCheck App, optimizing database queries and streamlining API integrations.
- Contributed to the TensorFlow Addons repository, implementing a custom loss function and fixing compatibility issues with TensorFlow.

Software Engineer, Amazon(Client)

Oct 2022 – May 2023

- Engineered backend services using Spring Boot and implemented microservices architecture to ensure scalability and modularity for enterprise applications.
- Contributed to the development of an ML-based recommendation system, focusing on fine-tuning model parameters, optimizing data pipelines, and ensuring seamless data ingestion for accurate predictions.
- Assisted in integrating the recommendation system with RESTful APIs, enabling real-time personalized suggestions for users.
- Built advanced dashboards using ReactJS, visualizing key metrics and insights from the ML recommendation engine.
- Collaborated with teams to refine data preprocessing and optimize pipeline efficiency for improved system performance.

Big Data Engineer, CVS Health(Client)

June 2021 – Oct 2022

- Automated ETL workflows with Tableau Prep, reducing manual effort by 95%, saving 35+ hours monthly.
- Optimized 50+ Sqoop jobs, managing 5TB of data in HDFS and Hive, ensuring low-latency queries.
- Configured and monitored network security measures, including firewalls and intrusion detection systems.
- Reduced query times by 60% on 10TB datasets using Spark RDD transformations and actions.
- Built data quality framework using Apache Spark for schema validation & data profiling on 1TB+ datasets, ensuring data accuracy & integrity.
- Applied advanced Spark transformations to manipulate and analyze unstructured data, executing complex text mining algorithms on 1 billion+ records for user table utilization insights.
- Managed end-to-end data pipelines in GCP, integrating PySpark and BigQuery to streamline data flows and mitigate risks in cloud-based infra.

TECHNICAL SKILLS

Programming:	Data Structures and Algorithms (DSA), Java, Python, JavaScript
Web Frameworks:	Spring Boot, FastAPI, Next.js, REST APIs, Microservices
AI/ML Libraries:	TensorFlow/Keras, PyTorch, Hugging Face, LangChain, LLM, RAG
Big Data/Cloud:	Hadoop, PySpark, Hive, Sqoop, MySQL, MongoDB, SQL, AWS, GCP
Developer Tools:	Docker, Git, Jenkins, Google Colab, Anaconda, CUDA

PROJECTS & RESEARCH

- Chat with Teja Sayya | RAG(Retrieval Augmented Generation):** [link](#)
Built a RAG-based AI agent using LLM functionality and custom data, enabling scalable and context-aware conversational AI Agent.
- Connect4 with AI | Alpha-Beta Pruning Search Algorithm:** [GitHub Repository](#)
Developed an AI-powered Connect Four game using Python and Pygame with an interactive GUI. Implemented various algorithms like Minimax and Alpha-Beta Pruning to create challenging AI opponents. Skills: Python programming, AI algorithms, and Search Algorithms via games.
- Alzheimer's Disease Analysis | Machine Learning:** [Github Repository](#)
Researched ML models to analyze the impact of various factors on Alzheimer's risk using Linear Regression, Random Forest, SVMs, and XGBoost.
- MakeItTalk | Deep Learning models:** [Hugging face spaces](#)
On research paper "MakeItTalk". Converts an Image & Audio file into Facial Animation Video. Used Convolution Neural Networks(CNNs), Recurrent Neural Networks (RNNs), Generative Adversarial Networks (GANs), LSTM (Long Short-Term Memory) networks
- Photo App | ReactJs:** [link](#)
Developed a scalable React-based photo sharing application with MongoDB as the database and Material UI for the frontend.
- Real-Time Chat Application | Spring Boot, Web Sockets + React:** [GitHub Repository](#)
Developed a real-time chat application using Spring Boot, WebSockets, and React, enabling users to join chat rooms via unique room IDs and communicate seamlessly. Integrated MongoDB for data persistence and deployed containerized microservices using Docker.
- AI-Powered Agreement Risk Analyzer | Gemini AI:** [link](#)
SaaS Tool to extract key clauses, assess risks, and simplify document analysis with cutting-edge AI
- Pixo.ai | Text 2 Image:** [link](#)
SaaS AI Tool to convert Text to Image