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 – GSoC — **June 2023 - Present**

- Optimized Rocket.Chat queries, reducing execution time by 40% and API latency by 30%.
- Streamlined FitCheck App API integrations, cutting latency by 25% and boosting engagement by 15%
- Enhanced TensorFlow Addons with a custom loss function, improving accuracy by 12% and fixing 5+ compatibility issues.

Software Engineer, Amazon(Client) — **Oct 2022 – May 2023**

- Built scalable backend services with Spring Boot, handling 10,000+ users at 99.9% uptime.
- Improved ML recommendation accuracy by 18% and reduced training time by 25%.
- Optimized data pipelines, cutting ingestion latency by 40% for 1M+ users.
- Created ReactJS dashboards for 5+ business units, improving decision-making by 20%.
- Reduced pipeline runtime by 30% and improved data quality by 15%.

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 a data quality framework with Apache Spark for schema validation & profiling 1TB+ datasets, ensuring data integrity.
- Managed data pipelines in GCP with PySpark and BigQuery, streamlining flows and reducing risks in cloud infrastructure.
- Processed 10TB+ daily with 90.5% reliability using Hadoop and AWS EMR.

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
- **Fit Check | Fashion App (Currently Working):** link
  Personalized AI fashion recommendation system.