

DURGA PHANI TEJA PASUPULETI

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EDUCATION

Binghamton University, State University of New York — Binghamton, NY

Master of Science in Computer Science (AI Track) | CGPA: 3.66 | Expected May 2026

Relevant Coursework: Artificial Intelligence, Data Mining, Machine Learning, Cloud Computing, Large Language Models.

Velagapudi Ramakrishna Siddhartha Engineering College (SAHE/VRSEC) — Vijayawada, India

Bachelor of Technology in Information Technology | CGPA: 3.30 | Aug 2016 - Sep 2020

Relevant Coursework: Design and Analysis of Algorithms, Artificial Neural Networks, Big Data, Database Systems

SKILLS

Languages: Python, Java, C, Shell

Machine Learning & AI: PyTorch, TensorFlow, scikit-learn, Transformers, LLMs, NLP, pandas, NumPy

Cloud & Data: SQL, AWS, Azure, Google Cloud, Terraform, Oracle, MongoDB, Tableau, Power BI

DevOps: Git, Docker, Jenkins, Linux, Ansible, Jira, Gerrit

PROJECT EXPERIENCE

Optimized Retrieval-Augmented Generation (RAG) System for Enterprise Knowledge Bases

Python · FAISS · LlamaIndex · HuggingFace · Sentence-Transformers · Cross-Encoder Reranking · Streamlit

- Built an end-to-end RAG pipeline over 6,000+ documents, enabling grounded enterprise QA with citation support
- Conducted embedding and retrieval ablations (MiniLM, BGE, E5, chunking, depth), improving answer accuracy by 10%
- Reduced hallucination by 15% via hybrid retrieval and cross-encoder reranking while maintaining 1.6s p95 latency; implemented evaluation framework measuring Recall@k, MRR, and grounded accuracy

AI-Job-Analyzer – AI-Powered Resume Screening & Job Intelligence Platform

Python · Sentence-BERT · Transformers · AWS EC2 · Terraform · Streamlit · Playwright

- Designed and deployed an end-to-end NLP system to compute semantic similarity between resumes and job descriptions using Sentence-BERT embeddings
- Built real-time job scraping pipelines with Playwright to dynamically match candidate profiles to live job postings
- Provisioned and deployed scalable cloud infrastructure on AWS EC2 using Terraform and load balancing for fault tolerance
- Implemented keyword gap analysis to identify missing technical skills and enhance resume-job alignment

Topic Modelling using Deep Learning through Text Mining

Python · NLP · Deep Learning

- Implemented topic modelling on large-scale unstructured text data to extract meaningful document clusters
- Applied deep learning-based text embeddings to improve semantic grouping and topic coherence
- Performed exploratory data analysis and model evaluation to validate interpretability and clustering performance

Automatic Door Access Using Facial Recognition

Python · OpenCV · NumPy

- Developed a facial recognition pipeline for secure access control using image preprocessing and feature extraction
- Optimized image processing workflows to enhance recognition performance and system efficiency
- Evaluated facial recognition algorithms and improved model robustness through iterative testing

PROFESSIONAL EXPERIENCE

TATA CONSULTANCY SERVICES LTD (TCS), *Developer* | Hyderabad, Telangana

| Jan 2021 - Jun 2024

- Managed enterprise-scale backup and recovery infrastructure for Ericsson D&S using Veritas NetBackup, ensuring high availability of production data across distributed client servers
- Automated deployment and configuration of backup agents using Python, Shell, and Ansible, reducing manual effort by 20%
- Engineered log parsing and validation scripts to analyze backup metadata and detect failure patterns, improving restore reliability
- Resolved critical production incidents, improving SLA adherence by 10% and minimizing system downtime
- Deployed containerized services using Docker and Kubernetes and enhanced CI/CD pipelines using Git and Jenkins

ARETE IT SERVICES, *Developer Intern* | Vijayawada, Andhra Pradesh

| Apr 2019 - Jun 2019

- Developed Python modules for image data ingestion and preprocessing in a facial recognition system
- Optimized image processing workflows, improving performance and execution efficiency
- Evaluated facial recognition algorithms and analyzed model outputs to support accuracy improvements

PUBLICATIONS

Effective Comparison of LDA with LSA for Topic Modelling, IEEE ICICCS, 2020

ACHIEVEMENTS

- Awarded Best Major Project at VR Siddhartha Engineering College for outstanding technical implementation and innovation
- Recognized with Best Poster Award at Binghamton University for collaborative research presentation
- Received multiple Spot Awards at TCS for delivering automation solutions and resolving high-impact production issues