

Akhileswari Pemmanaboina

(781) 809-5566 ✉ apemmanaboina@gmail.com [linkedin.com/akhila](https://www.linkedin.com/akhila)

Education

Texas Tech University

Master of Science in Computer Science

- **Relevant Coursework:** Data Structures and Algorithms, Design Patterns, Data Science, Operating Systems, Database Management System, Software Project Management, Pattern Recognition, Neural Networks, Computer Architecture, Statistics.

Lubbock, Texas

May 2025

University of Massachusetts Boston

Master of Science in Computer Science

- **Relevant Coursework:** Applied Machine Learning, Object-Oriented Design and Programming, Database Backed Websites.

Boston, MA

Aug 2023 - Dec 2023

Experience

AWS Data Engineer

Calsoft Private Limited

- Built scalable data pipelines with PySpark, SQL, and AWS EMR, integrating Redshift, Glue, and Apache Iceberg; automated ETL workflows using Airflow DAGs.
- Developed a data quality framework with PyDeequ and Pytest based unit testing; results get stored in Redshift and Iceberg.
- Automated testing and deployment with CI/CD pipelines, and developed secure, high-performance FastAPI and GraphQL endpoints for dynamic stakeholder access.

Jun 2024 – Jan 2025

San Jose, CA

Full Stack Developer

Our Broking

- Designed responsive web interfaces using HTML, CSS, Bootstrap, and developed RESTful APIs with Python and FastAPI for scalable back-end logic.
- Built a live stock announcement extractor for NSE with integrated analytics to support data-driven decisions.

Jan 2023 – Apr 2023

India

Software Engineer

WallStBulls (Stealth start-up Company)

- Constructed backend services with FastAPI, supporting a stock and crypto recommendation app with Python, MongoDB, and Firebase for real-time data handling.
- Utilized BeautifulSoup, Selenium for web scraping; applied basic ML algorithms for stock forecasting, and deployed using GCP and Docker.

Dec 2021 – Dec 2022

India

Projects

[Available on Github](#)

University Course Management System | MongoDB Atlas, FastAPI, HTML, CSS, JavaScript, JWT, Heroku, GitHub Pages

- Engineered a web application to manage courses, student enrollments, instructor records, and fee-related data with secure and role-based access.
- Launched 15+ APIs for authentication, fee management, and user management, ensuring seamless backend-to-frontend integration.

RAG Investment Evaluator | LangChain, OpenAI GPT, MongoDB Atlas Vector Search, ChromaDB, FPDF, Prompt Engineering, Streamlit

- Built a RAG-based application that evaluates startup investment memos by extracting key fields, retrieving relevant VC guidelines using MongoDB Atlas Vector Search, and assessing compliance using GPT.
- Generated structured PDF reports and integrated a chatbot to answer policy-related questions using LangChain orchestration and semantic search.

Stock Application and Sentiment Analysis | Python, React.js, MongoDB, Selenium, FastAPI, Machine Learning, Elasticsearch

- Built a full-stack stock-based web application using Python, React.js, MongoDB, FastAPI, and Selenium to provide real-time stock data, news, and sentiment analysis for 100 stocks.
- Implemented machine learning algorithms to classify stock-related news articles as positive, negative, or neutral, predicting potential impact of news on the stock prices and enabling data-driven decision-making.

Attendance System with Face Recognition | Python, HTML, CSS, Machine Learning, TensorFlow

- Developed a face recognition-based attendance system with 98% accuracy and 80% time reduction, optimized with a user-friendly HTML/CSS interface and robust ML models for varying conditions.

Technical Skills

Languages: Python, JavaScript, PHP, HTML, CSS .

Frameworks/Tools: FastAPI, Tableau, Postman, Django, Flask, PyTorch, Docker, Elasticsearch, Power BI, Apache Spark.

Databases: MySQL, MongoDB, ChromaDB.

AI/ML & LLM: Prompt Engineering, Retrieval-Augmented Generation (RAG), MongoDB Atlas Vector Search, HuggingFace Transformers, LangChain, PDF/JSON/Email-based extraction.

Cloud Services: AWS.

Automation & Version Control: GitHub, GitLab.

Testing: Pytest, Unit testing, Selenium.

Certifications

MongoDB: Building RAG Apps Using MongoDB(Atlas Vector Search).

Hackerrank & Others: SQL, Python, Problem Solving, Generative AI in Practice, Introduction to LLM's.

Coursera: Python, Python Data Structures, Algorithm Toolbox

Udemy: Docker, Machine Learning with Python, Introduction to AWS, Introduction to Deep Learning