



# Kandula Sandeep Kumar

Roll No.: 22MEB0A24

Bachelor Of Technology

Bachelor of Technology in Mechanical Engineering

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Portfolio

GitHub Profile

LinkedIn Profile

## EDUCATION

### •National Institute of Technology, Warangal

Bachelor of Technology in Mechanical Engineering

2026

CGPA: 7.50

### •IIT Madras

Bachelor of Science(BS) Online degree in Data Science and Programming

2026

CGPA: 7.43

### •FIITJEE

Intermediate Education

2022

Percentage: 97.1%

## EXPERIENCE

### •Mouri Tech

May 2025-July 2025

Internship

- Built a 3-stage ML pipeline (Image QA, Invoice OCR, Price Prediction) to automate second-hand product verification and pricing.
- Designed a cloud-first data architecture with **Azure Blob** (images/invoices) for unstructured data and **Azure SQL DB** for structured metadata and results.
- Applied **MobileNetV2** + **OpenCV** for image QA age detection (**92% accuracy, 88% recall**) and **Azure Cognitive Services OCR** for invoice verification (**95% precision**).
- Built a **LightGBM** pricing model (**MAPE 6%**) using product metadata to ensure reliable price recommendations.

## PERSONAL PROJECTS

### •Quiz Master

Modern Application Development Project, IIT Madras

- **Tech Stack:** Jinja2 | Flask | SQLite | SQLAlchemy
- Designed a **secure, role-based** quiz application using **CSRF** protection, **CORS**, and **WTForms**.
- The application is packed with features for both admins and users. Users can take **timed quizzes** and get **instant feedback**, while admins have full control to manage all the content.
- The application's backend was optimized using SQLAlchemy **ORM** and **pagination**, leading to a 40% improvement in data retrieval and faster page loads.

### •Fashion Recommendation System

Deep Learning Project

- **Tech Stack:** Tensorflow | Numpy | OpenCv | Scikit Learn
- Built recommendation system using **ResNet50** + **GlobalMaxPooling2D** for feature extraction on 40K fashion dataset.
- Preprocessed images and **generated 2048-dimensional embeddings** for efficient representation.
- Implemented **k-Nearest Neighbors** (k-NN) with Euclidean distance to retrieve top-5 similar items.

### •AI Financial News Analyzer

Langchain Project

- **Tech Stack:** LangChain | FAISS | Unstructured | OpenAI API
- Built an AI-powered system to analyze multiple newspaper articles and answer finance-related questions..
- Implemented **LangChain** with **RecursiveTextSplitter** to create context-preserving document chunks..
- Used **FAISS vector database** with semantic embeddings (SentenceTransformers) for efficient retrieval.
- Integrated **RetrievalQA** with **mapreduce** to aggregate knowledge across multiple news sources.

## TECHNICAL SKILLS AND INTERESTS

**Languages/Tools:** Python, Structured Query Language (**SQL**), Excel

**FrameWorks:** Pandas, Matplotlib, Scikit-Learn, Tensorflow, FAISS (Facebook AI Similarity Search), Langchain

**Databases/ORMs:** SQLite, MySQL, PostgreSQL, SQLAlchemy

**Cloud Platforms:** Azure [Blob, SQL, Cognitive Services, ADF]

**Statistical Techniques:** Hypothesis Testing, Regression Analysis, Optimization

## POSITIONS OF RESPONSIBILITY

### •Management Member, Team Spardhak

Feb 2024- Mar 2025

- Helped manage social media handles by preparing posters, letters, reports and presentations using **productivity tools** (Excel, Canva, PowerPoint) for organization of content, and smoother coordination within the team.