

# HAREESH LOTTI

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🐙 GitHub


## Education

<b>Bachelor of Technology in Computer Science and Engineering</b> <i>Rajiv Gandhi University of Knowledge Technologies, Nuzvid, AP</i>	<b>2022–2026</b> <i>CGPA: 8.75</i>
<b>Pre-University Course – PUC</b> <i>Rajiv Gandhi University of Knowledge Technologies, Nuzvid, Andhra Pradesh</i>	<b>2020–2022</b> <i>CGPA: 9.6</i>
<b>Board of Secondary Education, Andhra Pradesh</b> <i>Vignan Vidhya Nikethan</i>	<b>2019–2020</b> <i>CGPA: 10</i>

## Experience

<b>Summer Internship - Black Bucks – AI</b> ML Intern	<b>2025</b>
<ul style="list-style-type: none"><li>Collaborated on developing and optimizing machine learning models for real-world business use cases.</li><li>Applied data preprocessing techniques and feature engineering to improve model accuracy.</li><li>Gained hands-on experience with supervised and unsupervised learning algorithms.</li></ul>	
<b>Web Team Member – eCrush, IIIT Nuzvid</b>	<b>2022 – Present</b>
<ul style="list-style-type: none"><li>Published student results by scraping the university website, reducing manual workload and ensuring timely dissemination of academic updates.</li><li>Developed and maintained web tools to support event management and student engagement.</li><li>Organized multiple technical events, significantly improving student participation and technical exposure.</li></ul>	
<b>Project Contributor – IIIT National Level Fest (E1 Year onwards)</b>	<b>2021 – Present</b>
<ul style="list-style-type: none"><li>Designed and implemented a <b>Lottery Ticket Generation and Email Automation System</b> using Python.</li><li>Solution adopted every year by juniors, showcasing long-term impact and scalability.</li><li>Contributed the system to fest stalls, generating over <b>₹60,000 revenue</b>, demonstrating both technical and entrepreneurial skills.</li></ul>	
<b>Co-ordinator – Helping Hands (Charity Club)</b>	<b>2021 – Present</b>
<ul style="list-style-type: none"><li>Coordinated fundraising campaigns and facilitated donations for underprivileged communities.</li><li>Enhanced outreach and streamlined contribution processes, increasing impact.</li></ul>	
<b>Co-ordinator – Student Recreation Club (SRC)</b>	<b>2021 – Present</b>
<ul style="list-style-type: none"><li>Organized and managed recreational activities promoting student well-being and community bonding.</li><li>Contributed to campus culture by fostering creativity, collaboration, and inclusivity.</li></ul>	

## Projects

<b>Quora Question Pairs Semantic Similarity</b>	<a href="#">Live Demo</a> 
<ul style="list-style-type: none"><li>Built an end-to-end NLP pipeline to detect duplicate questions using text preprocessing, tokenization, and 15+ engineered similarity features (token/length/fuzzy).</li><li>Trained a Random Forest classifier on engineered features + Bag-of-Words (CountVectorizer); achieved Accuracy 0.84 and F1-score 0.82 on validation.</li><li>Deployed real-time inference via a Streamlit web app with robust input validation and parity between online and offline preprocessing.</li><li>Packaged artifacts (<code>model.pkl</code>, <code>cv.pkl</code>, <code>stopwords.pkl</code>); leveraged SciPy sparse matrices to efficiently stack engineered features with BoW vectors.</li><li>Authored batch inference notebook for Kaggle submission replicating the full preprocessing/feature engineering pipeline.</li><li>Tech: Python, Pandas, NumPy, Scikit-learn, Streamlit, BeautifulSoup, fuzzywuzzy, NLTK, SciPy.</li></ul>	

## LangChain Chatbot and Prompt Playground

- Built a conversational chatbot using LangChain with runnable sequences and chains; supports multiple providers (OpenAI/Gemini/Hugging Face) and local models.
- Implemented dynamic prompt templates, message placeholders, and temperature control; integrated structured output parsers (TypedDict/Pydantic/JSON) for reliable extraction.
- Delivered an interactive playground (Streamlit) for testing prompts, chat history, and output parsing; improved prompt iteration speed and reproducibility.
- Tech: Python, LangChain, Streamlit, Hugging Face, OpenAI/Gemini APIs.

## Pneumonia Detection using CNN (VGG16)

[GitHub](#) 

- Built a pneumonia detection system using VGG16 on chest X-ray dataset.
- Applied transfer learning, data augmentation, and early stopping achieving high accuracy.
- Tech: Python, PyTorch, NumPy, Matplotlib.

## University Results Scraper

[GitHub](#) 

- Automated fetching of results from university portal reducing manual workload by 90%.
- Enabled real-time access for students.
- Tech: Python, BeautifulSoup, Requests.

## Lottery Ticket Generator with Email Automation

- Designed a Python system to generate unique tickets and email them automatically.
- Implemented random winner selection with instant notification.
- Tech: Python, SMTP.

## Blog API with Flask

[GitHub](#) 

- Developed a fully functional REST API for a blog application using Flask.
- Implemented user authentication, authorization, and CRUD operations for posts.
- Used SQLAlchemy ORM for efficient data management.
- Tech: Python, Flask, SQLAlchemy, Alembic.

## End-to-End ML Project with Scikit-Learn

[GitHub](#) 

- Executed a full machine learning pipeline from data preprocessing to deployment using Python and scikit-learn.
- Implemented and compared models: linear regression, logistic regression, decision trees, random forests, and XGBoost.
- Applied feature engineering, hyperparameter tuning, and k-fold cross-validation to optimize model performance.
- Evaluated models with RMSE for regression and accuracy/F1 for classification.
- Tech: Python, Scikit-learn, Pandas, NumPy, Matplotlib.

## Technical Skills

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**Programming:** Python (advanced), Java, C, Bash/Shell Scripting, SQL

**AI/ML Frameworks:** PyTorch, TensorFlow, Scikit-learn, Keras, Transformers, XGBoost, LightGBM

**NLP & LLM:** LangChain, Hugging Face, OpenAI/Gemini APIs, NLTK, spaCy, fuzzywuzzy, BeautifulSoup, RAG, Prompt Engineering, FAISS, SentenceTransformers, PEFT, LoRA/QLoRA

**Data Analysis & Visualization:** Pandas, NumPy, SciPy, Matplotlib, Seaborn, Plotly, Geopandas

**Web Development & Deployment:** Streamlit, Flask, FastAPI, REST APIs, HTML, CSS, JavaScript, Docker, Git, CI/CD basics


**Databases:** MySQL

**Cloud/DevOps Tools:** AWS (S3, EC2), Google Cloud, Hugging Face Hub, Experiment tracking (Weights Biases, MLflow)

**Other:** Problem Solving, Leadership, Event Management, Agile/Scrum methodology, Research Documentation

## Certifications

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- NPTEL – Deep Learning (Score: 85%)
- Coursera – Machine Learning with Python
- [View Certificates on GitHub](#) 

## Achievements

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- 1<sup>st</sup> Place – Madcode Coding Competition (University Level)
- 1<sup>st</sup> Place – Tech Hunt (University Level)
- Organized and mentored AI/ML workshops for juniors
- [View Achievement Certificates on GitHub](#) 