MOHIT SAI TATINENI

📞 984-289-4232 ✉ mohitsai.tatineni@gmail.com in linkedin.com/in/mohit-sai-tatineni

Education

Indiana University Bloomington   **Aug 2023 – May 2025**
Masters in Computer Science   *Bloomington, Indiana*

Vellore Institute of Technology   **Aug 2019 – May 2023**
B.Tech in Computer Science and Engineering with specialization in Artificial Intelligence   *Amaravati, Andhra Pradesh*

Experience

Software Engineer - Research Assistant   **Feb 2025 – Present**
Luddy School of Informatics - Indiana University   *Bloomington, Indiana*

- Co-developed a Smart Feedback System deployed in a live museum pilot, engaging visitors through adaptive quizzes, drag-and-drop image grouping, and reflective feedback mechanisms.
- Designed a touch-enabled interface and backend logic that personalized quiz flows based on demographic inputs, resulting in a 35% increase in visitor interaction time during testing.
- Engineered tagging workflows to flag ambiguous or underrepresented historical themes.
- Collaborated with curators and researchers to build a Memory Map Archive-an analytics dashboard aggregating visitor interpretations across 6+ demographic categories.
- Handled data ingestion, filtering, and anonymized archiving of user-contributed images and stories for research insights.

Corizo Edutech   **Jan 2023 – Jun 2023**
Data Science Intern   *Noida, Uttar Pradesh*

- Contributed to two key projects: Stock Price Prediction and Music Genre Classification using Python and ML.
- Developed and compared predictive models using ARIMA and LSTM for time series forecasting of stock prices; fine-tuned hyperparameters and optimized data preprocessing steps, resulting in an 18% improvement in accuracy.
- Performed exploratory data analysis and feature engineering to identify impactful indicators influencing stock trends.
- Fine-tuned Random Forest and KNN models for classifying music tracks based on extracted audio features; achieved 92% classification accuracy through iterative feature selection and cross-validation.
- Collaborated in cross-functional teams to deploy models and generate actionable insights for real-world datasets.

Projects

Full-Stack Social Media Platform with Real-Time Features | *React, FastAPI, MongoDB*   **Oct 2024 – Jan 2025**

- Built a full-stack social platform enabling secure user authentication, live chat, and profile customization.
- Designed a scalable MongoDB schema and React component system to reduce page load time by 30% on average.
- Launched ad marketplace with real-time notifications using WebSockets, increasing content click-through rates by 25%.
- Faced and solved challenge of syncing user states across multiple tabs and devices in real time.

AI-Powered SQL Injection Detection and Exploitation Agent | *LlamaIndex, ReAct Agents*   **Jun 2024 – Sep 2024**

- Developed an intelligent agent using GPT-4o and LlamaIndex to identify and exploit SQL vulnerabilities with adaptive payload logic and contextual reasoning.
- Improved testing time by 40% by integrating prompt chaining and dynamic query injection with minimal supervision.
- Overcame challenge of non-deterministic AI outputs by calibrating ReAct agents with retry logic and validation gates.

Dog Breed Detection System from CCTV Footage | *Python, Tensorflow, Keras, OpenCV*   **Jan 2024 – Apr 2024**

- Built and trained a CNN model to classify 108 dog breeds from surveillance video frames with 91% validation accuracy .
- Applied histogram equalization and Gaussian filtering to reduce noise and improve classification F1 score by 14%.
- Expanded dataset by scraping 5K+ new labeled images using custom OpenCV-based augmentation & cleaning pipeline.
- Addressed real-world challenge of low-light, blurry footage from urban CCTV systems by enhancing preprocessing layers.

Technical Skills

Languages: Java, Python, C, HTML/CSS, SQL, R
Developer Tools: VS Code, Google Colab, MongoDB Compass, PostgreSQL, Jupyter, Git
Technologies/Frameworks: Linux, React, .NET, FastAPI, Node.js, GitHub, Tensorflow, Keras, OpenCV

Certifications

AWS Certified Cloud Practitioner ↗
Docker Foundations Professional Certificate ↗

Publications

Predicting and Enhancing the Fluctuations of Cryptocurrency Value using ML ↗   December 2022
International Journal of All Research Education and Scientific Methods (IJARESM), Volume 10, Issue 12   Impact Factor: 7.429

Tracking the Storm: Visualizing Trends in U.S. Hurricanes & Climate Impact ↗   January 2025
International Research Journal of Engineering and Technology (IRJET), Volume:12, Issue:01   Impact Factor: 8.315