

Education

National Institute of Technology, Agartala <i>B.Tech in Computational Mathematics</i>	2023 – 2028 <i>CGPA: 7.73</i>
Amar Public Sr. Sec School, Jaipur <i>Senior Secondary (XII)</i>	2021 – 2022 <i>Percentage: 82.6%</i>
Vedanta International School, Jaipur <i>Secondary (X)</i>	2019 – 2020 <i>Percentage: 80.0%</i>

Projects

IMDB Sentiment Classifier — Streamlit, TensorFlow, Keras, NLP [Link](#)

- Built a real-time sentiment analysis app with 95% accuracy using an RNN model trained on 50,000 IMDB reviews.
- Preprocessed over 25,000 words with tokenization and sequence padding to fit input length of 500.
- Deployed interactive UI via Streamlit used by 10+ users for feedback and sentiment scoring.

Web Search Chatbot — LangChain, Groq LLaMA3, Streamlit [Link](#)

- Developed a multi-tool chatbot integrated with 3 real-time sources (Wikipedia, Arxiv, DuckDuckGo).
- Handled over 1,000 queries with Groq LLaMA3, showcasing fast inference latency under 500ms per response.
- Tracked agent decision paths in 100% of cases using StreamlitCallbackHandler for transparency.

SQL Query Chatbot — LangChain, LLaMA3, SQLAlchemy, Streamlit [Link](#)

- Developed a Streamlit-based chatbot that enables natural language interaction with academic MySQL databases using LLaMA3 and LangChain agents.
- Engineered robust handling of 20+ SQL query types using LangChain's Zero-Shot ReAct agent and SQLDatabaseToolkit.
- Ensured database security by using read-only access for SQLite (when applicable) and implementing secure credential management, including masked input for Groq API keys.

Phishing Detection API — Python, ML, FastAPI, Docker [Link](#)

- Achieved 94% phishing detection accuracy using ensemble models trained on 10,000+ labeled records.
- Reduced API response time to <150ms by optimizing FastAPI backend and Docker containerization.
- Automated the CI/CD pipeline using GitHub Actions and DockerHub, enabling seamless containerized deployment.

Achievements

- Solved 120+ algorithm problems on LeetCode to strengthen practical DSA skills.
- Selected for a competitive program Amazon Machine Learning Summer School.
- Built a seat demand forecasting model for redBus Hackathon 2025 using LightGBM, advanced DBD-based features, and GridSearchCV, securing Leaderboard Score 669.58 (Rank 175).

Technical Skills

- **Languages:** Python, C++, SQL
- **ML/DL:** TensorFlow, Keras, Scikit-learn, XGBoost, Transformers
- **Databases & Backend:** MySQL, MongoDB, SQLAlchemy, FastAPI, Flask
- **DevOps:** Docker, Git, GitHub Actions
- **Tools:** Streamlit, VS Code, Jupyter, Google Colab, Anaconda

Leadership / Involvement

- **Machine Learning Member, DCC NIT Agartala:** Led 5+ ML workshops and mentored 20+ juniors through project demos and code reviews.