AMRITA NIRBHEEK

+91 9057575144 • nirbheekamrita@gmail.com • linkedin.com/in/amrita-nirbheek • github.com/Amrita04N

Education

Vellore Institute of Technology, India *2022 – Present*
B.Tech in Computer Science and Engineering , CGPA: 8.02

Internship

Center for Development of Advanced Computing (C-DAC), Delhi **May 2025 – August 2025**
Web Development and Research Intern *Remote*
- Developed full-stack projects including Task Tracker and Memory Game using React.js, Tailwind CSS, FastAPI, and PostgreSQL.
- Implemented key features such as authentication, CRUD operations, state management, and REST API integration.
- Deployed projects on cloud platforms (Vercel & Render) ensuring smooth frontend-backend communication.
- Researched and documented modern web development practices, improving project scalability and maintainability.

Projects

Car Rental Project — FastAPI, REST APIs, PostgreSQL, JWT, Auth, Deployment, Architecture —GitHub **April 2025**
- Built **RESTful backend APIs using FastAPI** to handle vehicle bookings, availability, and user transactions.
- Designed a **PostgreSQL relational schema** to manage users, vehicles, and reservation workflows.
- Implemented **JWT-based authentication and authorization** to secure API endpoints.
- Exposed **CRUD APIs** consumed by a React frontend with clear client–server separation.
- Deployed the backend on **Render**, ensuring reliable availability and environment-based configuration.

Memory Game Project — React.js, Tailwind CSS, FastAPI, REST APIs — GitHub **August 2025**
- Developed a **FastAPI backend service** to manage game logic, player state, and scoring rules.
- Implemented **REST APIs for state management**, tracking scenes, inventory, and user progress.
- Enabled **data persistence using structured JSON** to support Save/Load functionality.
- Enforced **server-side validation** for victory conditions and game rules, decoupled from the frontend.

Credit Card Fraud Detection—Python, Scikit-learn —GitHub **February 2025**
- Developed a machine learning model to detect fraudulent credit card transactions.
- Applied data preprocessing techniques, feature engineering, and handled class imbalance using SMOTE.
- Trained and evaluated models using Logistic Regression, Random Forest, and XGBoost with accuracy and recall.
- Visualized performance metrics using confusion matrices and ROC curves.

Technical Skills

Languages: Python, Java, C++, HTML/CSS, JavaScript, SQL
Developer Tools: VS Code, GitHub
Technologies/Frameworks: FastAPI, REST APIs, PostgreSQL, Flask, React.js, Tailwind CSS, Scikit-learn, Pandas, NumPy, OpenAPI / Swagger, PyTest

Certifications —GitHub

- MERN Full Stack Certification – Ethnus
- DSA Structures in C++ - Coding Ninja

Achievements

- Achieved Multiple Badges on LeetCode and had maximum streak of 50+ days.

Leadership / Extracurricular

Women Empowerment Cell **2023 – 2024**
Student Coordinator
- Conducted several events promoting Women Safety .

Mharo Rajasthani Club **2024 – 2025**
Joint Secretary
- Conducted several events promoting Rajasthani Culture and Tradition .