Amit Kumar

Portfolio: amit.com
Github: amit/github

Email: amitkumar16525@gmail.com
Mobile: +91-995-5786-370

Education

- **National Institute of Technology, Tiruchirappalli** — Tamilnadu, India
  Bachelor of Technology - Computer Science and Engineering; GPA: 7.27 — *2021 - June 2025*
  Courses: *Data Structures, Operating System, Artificial Intelligence, Machine Learning, Networking, DBMS*

Skills Summary

- **Languages**: Python, C, C++, JavaScript, SQL
- **Frameworks**: Scikit, React.js, Next.js, Scikit, ExpressJs, NodeJs, Bootstrap, Machine Learning
- **Tools**: GIT, GitHub, Linux, PowerBI, PostgreSQL
- **DataBases**: MongoDB,MySQL
- **Soft Skills**: Leadership, Public Speaking, Time Management

Experience

- **Software Engineer -Microsoft**
  Digital Workplace Insight (Intern) — *May 2024 - July 2024*
  - **AI/ML Solution Development**: Created an AI/ML solution for workspace management that predicts seating needs and suggests optimal arrangements..
  - **Attendance Prediction Model**: Implemented a model to forecast office attendance, aiding in seat demand estimation and improving the employee experience.
  - **Seating Capacity Tracking System**: Designed a real-time seating capacity and occupancy tracking system, enabling effective space planning.
- **Summer Internship-NITT**
  Social Media Applicatioin (Intern) — *May 2023 - July 2023*
  - **Research Internship**: Worked under Dr. Madhukrishna, developing a social media application from scratch using the MERN stack.
  - **Interactive Social Media Platform**: Developed using MERN (MongoDB, Express.js, React.js, Node.js), enabling content sharing, community participation, and topic exploration.
  - **Core Functionalities**: Developed user authentication, pagination, and list rendering using RESTful APIs, enhancing a seamless and interactive user experience.

Projects

- **Real estate website**: Engineered a comprehensive MERN stack application tailored for real estate transactions. Built a secure and scalable backend with Node.js and Express.js, implementing JWT for authentication and bcrypt.js for password hashing. Designed a responsive, interactive front end with React.js, utilizing effective state management, and established RESTful APIs to enable efficient data exchange with MongoDB.
- **Medical Insurance Price Prediction (Machine Learning)**: Developed a medical insurance price prediction model through exploratory data analysis, outlier handling, and categorical feature encoding. Built and optimized machine learning models, including Linear Regression, RandomForest, and XGBoost, with cross-validation and hyperparameter tuning. Deployed the final XGBoost model for accurate predictions and analyzed feature importance to enhance model performance.
- **Online Payment Fraud Detection (Machine Learning)**: Developed an online payment fraud detection system using Python and machine learning models like XGBoost, RandomForest, and Logistic Regression to accurately predict fraudulent transactions. Conducted data preprocessing and feature engineering, including categorical encoding and correlation analysis, to optimize model input. Achieved high model performance by training multiple classifiers and evaluating with ROC AUC scores and confusion matrix analysis, showcasing expertise in fraud detection.

ACHIEVEMENTS

- Secured 1st position in Software domain in TransfiNITTe'23 Hackathon conducted by Technical Council, NITT.
- Secured 2nd rank in the Spider (Coding Club, NIT-Trichy) Algos Induction contest (2023)
- Secured College Rank 4 in CodeKaze-June'23 by Coding Ninjas, surpassing 1.5 lakh participants
- Rated Knight on LeetCode, 4-star on CodeChef, and Specialist on Codeforces
- Worked as TA (Technical Assistance) at Coding Ninjas for the Data Structure and Algorithm courses.

Volunteer Experience

- **Manager, Vortex CSEA** — NIT-T, India
  Led Vortex at NITT, driving innovation and engagement to elevate the event's success. — *Jan 2023 - Present*
- **Manager, Mathematics Team, Ignitte** — Kolkata, India
  Managed the Mathematics Team for Ignitte, teaching club, overseeing all club activities — *Mar 2022 - Dec 2023*