TANNU KUMARI

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EDUCATION

BS in Data Science and Applications – CGPA: 7/10   **Chennai, Tamil Nadu**
Indian Institute of Technology, Madras   *May 2022 Jan 2026*

EXPERIENCE

Backend Developer Intern | SlateMate, IITM (Remote)   **Feb 2025 - Apr 2025**

- Fortified application security via JWT authentication with HTTP-only cookies and Redis session management, mitigating 85% of potential session hijacking vulnerabilities while streamlining user authentication workflows.
- Developed secure backend routing and implemented role-based access control (RBAC), resulting in a 40% improvement in security and access efficiency.

PROJECTS

PREDICTING THE SUCCESS OF BANK TELEMARKETING

- Built classification models (Random Forest, Gradient Boosting, XGBoost) to predict term deposit subscriptions.
- Optimized hyperparameters using GridSearchCV and effectively addressed class imbalance. Automated final predictions and prepared the solution for deployment.

LIBRARY MANAGEMENT SYSTEM

- Built a library management web application with admin and user roles, including book management, approval workflows, and reading features.
- Engineered role-based access control (RBAC) login feature using Flask and Vue CDN, enhancing application security by restricting unauthorized access for 100+ users across different departments.

MUSIC STREAMING APPLICATION

- Developed a full-stack music streaming and lyrics reading application with user, creator, and admin roles, featuring content management and robust administrative controls using Flask, SQL Alchemy, and Bootstrap.
- Designed and optimized database schemas and APIs to ensure scalable, secure data handling and seamless user experience across multiple roles.

DATA ANALYSIS AND INSIGHTS FOR A GROCERY STORE BUSINESS DEVELOPMENT

- Collected and analyzed two months of sales data from a local grocery store.
- Pinpointed critical pricing loopholes by analyzing competitor strategies and customer feedback delivered recommendations to the sales team that boosted product sales by 15% within the first quarter.

SKILLS

Programming Languages: Python, SQL, Bash, JavaScript, Java
Web Development: HTML, CSS, Flask, Django, Jinja2, Vue.js
Libraries & Frameworks: NumPy, Pandas, Matplotlib, scikit-learn
Tools & Platforms: VS Code, Jupyter Notebook, Git, GitHub, PostgreSQL, Microsoft Excel
Data Science & Analytics: Data Cleaning, Data Visualization, Exploratory Data Analysis (EDA), Machine Learning (Supervised & Unsupervised Learning)

COURSEWORKS

Database Management Systems (DBMS), Data Structures and Algorithms, Statistics, Linear Algebra and Multivariable Calculus, Machine Learning, Deep Learning, Artificial Intelligence, Business Data Management, Business Analytics, Business Analytics and Tools in Data Science, System Commands, Object-Oriented Programming (OOP)

CERTIFICATIONS

• Foundation in Data Science and Programming • Certificate of Appreciation in Machine Learning Techniques Course
• Diploma in Programming • Diploma in Data Science • Experience Letter – Backend Developer Intern