PUNIT KUMAR

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in thepunitjaiswal ○ PunitJaiswal k thepunitkumar

Summary

Driven to leverage advanced proficiency in machine learning and programming to craft innovative solutions. Eager to contribute dynamic skills in software technologies and lead high-impact projects, fostering a culture of continuous learning and excellence in a forward-thinking organization.

Education

Indian Institute of Technology Madras   **Chennai, Tamil Nadu**
B.S. in Data Science and Applications - GPA: 8.72/10   *Expected: Aug 2026*

Institute of Computer Science & Technology   **Varanasi, Uttar Pradesh**
Bachelors of Computer Applications - Percentage: 71.5%   *Sep 2024*

Work Experience

Indian Institute of Technology, Dharwad   **Dharwad, Karnataka**
Python Developer   *Oct 2025 - Dec 2025*

- Engineered a high-performance Python simulation by translating complex mathematical formulas and legacy MATLAB algorithms into efficient, vectorized NumPy code.
- Applied advanced signal processing techniques to model, transform, and analyze complex, high-volume time-series data within a large-scale system simulation.
- Demonstrated advanced algorithmic proficiency by translating abstract mathematical specifications into a functional, data-intensive Python model from the ground up.

Projects

System Threat Forecaster (Classification)   **March 2025**
Python, Scikit-learn, Numpy, Pandas, Matplotlib, XGBoost, LightGBM   *Check it here*

- Developed a machine learning-based forecasting model to predict potential system security threats using telemetry data.
- Implemented ensemble methods combining XGBoost, LightGBM, and RandomForest models with advanced hyperparameter tuning and cross-validation strategies.
- Applied classification and anomaly detection techniques to identify suspicious patterns and predict potential cyber risks.
- Designed visual dashboards (Matplotlib/Seaborn) to present predictive insights, enabling proactive threat mitigation strategies.
- Evaluated models using metrics like accuracy, precision, recall, and F1-score, with LightGBM achieving the best results.

HomeGenie - Household Services Application   **Nov 2024**
HTML, CSS, JavaScript, VueJS, Python, SQLite, RestAPI, Flask   *Check it here*

- Designed and developed HomeGenie, a multi-user household service application connecting admin, service professionals, and customers on a single platform.
- Implemented role-based authentication and authorization ensuring secure access and personalized user experiences.
- Built service request and management workflows, enabling customers to book services and professionals to accept/track jobs efficiently.
- Integrated Flask backend with Vue.js frontend, ensuring seamless communication through RESTful APIs and responsive UI
- Optimized database design with MySQL for managing user data, service bookings, and transaction records, improving system reliability and scalability.

Technical Skills

Programming Languages: Python, SQL, C, C++, Java
AI/ML Libraries: NumPy, Scipy. Pandas, Scikit-learn, TensorFlow, Keras
Data Engineering : EDA, Data Cleaning, Preprocessing, Feature Engineering, Categorization
Machine Learning: Supervised & Unsupervised Learning, Model Fine-tuning, Evaluation Metrics
Data Operations & Analysis: Retail/Consumer Data Analysis/Quality Checks, ML-based Labeling, RegEx(basic)
Database: MySQL, SQLite, PostgreSQL, NoSQL, FastAPI
Tools & Platforms: Jupyter, Git, GitHub, Matplotlib, Seaborn, Excel, Linux

Soft Skills

Problem Solving, Leadership, Teamwork, Analytical Communication, Time Management, Adaptability