SUSHANT KUMAR

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PROFILE SUMMARY

Computer Science graduate from VIT Vellore with a strong foundation in Machine Learning, Data Science, and Large Language Models (LLMs). Passionate about building AI-driven solutions that solve real-world problems and enhance decision-making. Skilled in Python, scikit-learn, SQL, and Hugging Face, with hands-on experience in ML pipelines and LLM fine-tuning.

EDUCATION

- **Vellore Institute of Technology (VIT), Vellore, Tamil Nadu** — CGPA: 8.14
  B.Tech in Computer Science and Engineering Specialization in Information Security — *Sep 2021 – Jul 2025*

SKILLS

Programming Languages: Java, Shell/Bash Scripting, C++, C, Python
Data Scientist: Machine Learning, Deep Learning, NLP, LLM, Matplotlib, Seaborn, PyTorch, Scikit-Learn, Keras, Web Scraping, MS Excel, SQL Database, Power BI, Tableau, Python, Pandas, Numpy, R, Docker, Kubernetes, Mathematics.
Ethical Hacking Tools: Linux, Burp Suite, Nmap, Metasploit, Ghidra, Snort, Splunk
Cloud/Databases: MySQL, PostgreSQL, Amazon Web Services
Coursework: OOPs, DBMS, Operating System, Computer Networks, DSA
Soft Skills: Critical Thinking, Time Management, Effective Communication, Problem-solving, Leadership, Adaptability

EXPERIENCE

- **Satyukt Analytics - Machine Learning Engineer** — April 2025 - Present
  - Developed scalable, end-to-end ML pipelines using satellite imagery and ensemble models (Random Forest, Extra Trees) to enhance product capabilities.
  - Executed advanced preprocessing, feature engineering, and model optimization to deliver deployment-ready, production-grade ML solutions.

- **Adani Power Limited - Data Analyst Intern** — June 2024 - August 2024
  - Analyzed datasets to identify trends, anomalies, and optimization opportunities.
  - Developed dashboards and reports using SQL, Python, Power BI, and Tableau to present key insights.

- **Cynox Security - Security Analyst Intern** — September 2023 - February 2024
  - Collaborated with CERT-IN, contributing to national cybersecurity initiatives and incident response activities.
  - Conducted ethical hacking and penetration testing on websites to identify and exploit vulnerabilities.

PROJECTS

- **Log Anomaly Classification using Fine-Tuned TinyBERT - [Python, PyTorch, Hugging Face, Regex, LLM, NLP]**
  - Built an LLM-based anomaly detection system using TinyBERT (4-layer, 312-dimensions), fine-tuned on system logs with 2-class token-level classification using Hugging Face Transformers, embeddings, and 1M+ parameters.
  - Designed a regex-based log parser and prediction pipeline with tokenization, context extraction, and epoch-wise training; achieved anomaly probability scoring via attention-based model layers.

- **Bank Loan Analysis - [Power BI, MS SQL, Excel]**
  - Provided actionable insights on key performance indicators (KPIs) such as Total Loan Applications and Total Amount Funded with classification into good loans and bad loans.
  - The live dashboard will empower the bank to identify potential bad loan applications, limiting them to below 5-7% of the total applications. This will also assist the bank in optimizing loan terms and pricing through comprehensive monitoring.

- **Malware Detection System - [Python, Pandas, NumPy, Scikit-learn, TensorFlow, Keras, Streamlit]**
  - Reduced malware incidents by 40% through implementing real-time detection for Android apps.
  - Processed and analyzed a dataset of 29,335 entries to detect potentially malicious permissions.
  - Developed a production-ready model with high accuracy for enhanced cybersecurity using large data sets to evaluate performance.

- **OWASP Vulnerability Scanner - [Python, Streamlit, Requests, OWASP Top 10]**
  - Delivered a cross-platform, production-ready tool for developers and cybersecurity professionals.
  - Implemented real-time detection for OWASP Top 10 vulnerabilities.

CERTIFICATION

- **Career Essentials in Data Analysis by Microsoft and LinkedIn** - Learned foundational concepts used in data analysis and practiced using software tools for data analytics and visualization.
- **Certified Ethical Hacker (CEH)** - Comprehensive training in ethical hacking, cryptography, and penetration testing.
- **AWS Cloud Practitioner** - Covered foundational AWS concepts including cloud computing, global infrastructure, pricing, and support models. Gained understanding of core AWS services, security, and cloud value propositions.