AVINASH KUMAR SINGH

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PROFILE Aspiring Computer Science Engineer with a strong foundation in programming, data analysis, and web development. Seeking to leverage technical expertise and problem-solving skills to contribute to innovative projects while growing in a collaborative and dynamic work environment.

EDUCATION Vellore Institute of Technology, Bhopal| july 2025 - Present
B-tech in Computer Science and Engineering
Specialization: Cyber Security & Digital Forensics

Kendriya Vidyalaya No.1 Arakkonam,Chennai|12TH Standard| April 2021- July 2022
Navy Children School ,Chennai |10th Standard| April 2019 -July 2020

SKILLS

- Programming: Python, C++, SQL, Java Machine Learning & AI: Supervised & Unsupervised
- Learning, Deep Learning (CNNs, RNNs),
  Natural Language Processing (NLP), Reinforcement Learning
- Data Analytics & Engineering: Data Cleaning, Feature Engineering, Data Visualization, Statistical Analysis, Predictive Modeling, Big Data Processing
- Tools & Technologies: Jupyter Notebook, VS Code, IntelliJ, MySQL Server, Power BI, Tableau, Apache Spark, Hadoop, AWS, Google Cloud
- Soft Skills: Problem Solving, Critical Thinking, Team Collaboration, Leadership, Analytical Thinking
- Web Development: HTML, CSS, JavaScript

INTERNSHIPS REDYNOX | Cyber Security Intern | Jun 2025 - Jul 2025

- Hands-on experience in network security by configuring firewalls and monitoring SIEM tools for real-time threat detection.
- Performed vulnerability assessments and penetration testing using tools like Nessus and Metasploit to identify and remediate security weaknesses.
- Assisted in incident response efforts, analyzing simulated cyberattacks (e.g., ransomware) and helping refine mitigation strategies.
- Contributed to security compliance audits, ensuring adherence to industry standards like NIST and ISO 27001.
- Helped develop employee cybersecurity training programs, focusing on phishing awareness and secure password practices.

PROJECTS

Market Basket Analysis using Association Rule Mining | Jan 2024

- Conducted Market Basket Analysis (MBA) using Apriori and FP-Growth algorithms to identify purchasing patterns in transaction data.
- Derived insights on product bundling and cross-selling strategies to optimize inventory and boost sales.
- Visualized relationships between products using network graphs to enhance decision-making for retail businesses.

Movie Recommendation System using K-Nearest Neighbors (KNN) | Nov 2024

- Built an item-based collaborative filtering recommendation system using KNN and similarity metrics like cosine similarity and Pearson correlation.
- Engineered a scalable recommendation pipeline to improve content discovery in streaming platforms.
- Evaluated model performance with precision, recall, and ROC curves, optimizing similarity thresholds for enhanced accuracy.

Credit Card Fraud Detection using Machine Learning | Jan 2025

- Developed a fraud detection system using logistic regression, random forests, and XGBoost on imbalanced datasets.
- Implemented SMOTE and anomaly detection techniques to improve fraud detection rates by 35%.
- Deployed the model using Flask and integrated it into a real-time transaction monitoring system.

Automated Resume Screening using NLP & Deep Learning | May 2025

- Designed an NLP-based resume screening system using BERT and Named Entity Recognition (NER) to classify and rank candidates efficiently.
- Achieved 90% accuracy in predicting candidate-job fit based on textual resume data.
- Integrated the system into an HR dashboard for seamless recruitment process automation.

Customer Churn Prediction using Predictive Analytics | Mar 2025

- Built a predictive model to identify at-risk customers for a telecom company using logistic regression and ensemble learning.
- Improved churn prediction accuracy by 28% using feature selection and hyperparameter tuning.
- Provided data-driven recommendations for customer retention strategies, reducing churn by 15%.

ACHIEVEMENTS

- Gold Medalist in Basketball - Represented university in national-level tournaments.

- Ranked in Top 5% of Kaggle Competitions - Participated in multiple machine learning hackathons and secured top rankings.

- Published Research Paper on AI & Predictive Analytics - Presented at an international data science conference.

- 100+ day learning streak on Duolingo for German