Ajay Vasan

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SKILLS

- **Languages**: Python, Java, Kotlin, XML, Bash, C, C++
- **Frameworks**: Pandas, NumPy, Scikit-Learn, Tensor-Flow, PyTorch, Keras, Paramiko, Socket, HTML and CSS
- **Tools/Platforms**: Selenium, BeautifulSoup, Information Retrieval, Cyber Security, MySQL, Vector Databases
- **Technical Skills**: Machine Learning, Data Preprocessing, Natural Language Processing, Data Structures, Algorithms, Data Visualization, Linux, Networking, Cyber Security Awareness, Information Retrieval
- **Soft Skills**: Critical Thinking, Problem-Solving Skills, Leadership Excellence, Project Mastery, Adaptive Thinking, Time Discipline, Quick Learning, Knowledge Retention
- **Communication**: English, Tamil (Professional Proficiency), German (A1 Level), Hindi (Intermediate)

INTERNSHIP

- **Allsoft Solutions and Services Pvt. Ltd. – IBM Collaborated Program**   June 2024 – July 2024
  Internship Trainee
  - **About:** Completed a 6-week IBM-affiliated intensive training in cybersecurity fundamentals, covering network security, system hardening, and threat detection. Gained practical experience in system administration, security configurations, and advanced network protocols under IBM's industry-standard methodologies.
  - **Key Contributions:** Developed a Honeypot security system using Python and Paramiko to detect unauthorized access, implemented multi-threaded sockets for real-time attack simulations.
  - **Tech stacks used:** Python, Paramiko, Sockets, Threading, Virtual Machines, Linux

PROJECTS

MACHINE LEARNING

- **Customer Segmentation:**   November 2024
  - Segmented **200+ customer profiles** using K-Means, Hierarchical Clustering, and DBSCAN, enabling businesses to identify high-value customer groups for **personalized marketing.**
  - **Improved clustering efficiency by 35%** through optimized feature engineering and evaluation metrics like Silhouette Score and Davies-Bouldin Index.
  - **Tech:** Python, Pandas, NumPy, Scikit-Learn, Matplotlib, Seaborn, K-Means, Hierarchical Clustering, DBSCAN

- **Bangalore House Price Predictor:**   April 2024
  - Developed an advanced house pricing model by analyzing **13,000+ listings from MagicBricks**, empowering data-driven real estate decisions.
  - Eliminated brokerage dependency, enabling users to **save ₹45,000+ per transaction** while ensuring fair and transparent property valuation.
  - Streamlined data pipelines for scalable, high-efficiency property price forecasting.
  - **Tech:** Python, Pandas, NumPy, Scikit-Learn, Matplotlib, Streamlit

- **Auction Verification:**   April 2024
  - Designed an advanced machine learning model that verified auction results with 98% reliability, detecting inconsistencies in data from **Germany's 4G spectrum** auctions to enhance financial decision-making processes.
  - The system enhances decision-making, mitigating potential financial miscalculations amounting to **billions of dollars.**
  - **Tech:** Python, Pandas, NumPy, Scikit-Learn, Data Validation, Predictive Modeling

CYBER SECURITY

- **Honeypot:**   July/2024
  - Developed an **IBM-certified deceptive honeypot system**, deploying **fake HTTP and SSH services** to attract and analyze **500+ unauthorized access** attempts.
  - Logged critical attacker data, **including IP addresses, device types, browser metadata, and SSH authentication attempts,** enhancing threat intelligence.
  - **Successfully validated and tested by IBM**, proving real-world effectiveness in **network security and intrusion detection.**
  - **Tech:** Python, Socket, Paramiko, Multi-Port Listener, Threat Intelligence, Intrusion Detection System

CERTIFICATES

- Programming Fundamentals in Kotlin – by Meta   December 2024
- Cybersecurity Fundamentals - by IBM-Skills Build   July 2024

EDUCATION

Lovely Professional University   Jalandhar, Punjab

- *Bachelor of Technology - Computer Science and Engineering; **CGPA: 7.51***   *Since September 2022*

National Public School CBSE   Namakkal, Tamil Nadu

- *Senior Secondary; **Percentage: 76%***   *June 2021 - March 2022*
- *Secondary; **Percentage: 78%***   *April 2020 - March 2021*