

Harsh Shrishrimal

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EDUCATION

University of Maryland

MS in Data Science

College Park, MD

May 2026 | GPA-3.73/4.0

- Coursework: Probability & Statistics, Machine Learning, Cloud Computing, Natural Language Processing, Deep Learning

Savitribai Phule Pune University

BE in Computer Science

Pune, India

Jun 2023 | GPA-3.2/4.0

- Coursework: Database Management Systems, Business Intelligence, Data Science and Big Data, Artificial Intelligence

WORK EXPERIENCE

Converge Technology Solutions

Artificial Intelligence Intern

New York, NY (Remote)

June 2025 – Aug 2025

- Developed **OWASP-based, AI pentesting modules** using **Django**, **Celery**, and **DSPy** to detect **LLM vulnerabilities**
- Integrated shared memory context and **MIPROv2** optimizer, boosting injection accuracy to a **4.5/5 success grade**.
- Enhanced UI and built auto-stop attack flow using **WebSockets**, **HTML**, and **Docker**, reducing manual testing time
- **Collaborated** in an agile team using **GitHub**, **Jira**, and **DSPy**, contributing to red team tools and statistical test design

Shanti Technologies

Machine Learning Engineer

Pune, India

Jul 2023 – Jun 2024

- Trained **TensorFlow** models using **historical sales data** to minimize **stockouts** for perishable goods
- Developed **dynamic pricing algorithms** in **Python**, integrating **seasonal** and **behavioral logic** via custom **APIs**
- Designed **ETL pipelines** with **Apache Airflow** and **Google Cloud Functions** to automate **inventory** and **billing** data flow
- Applied **time-series modeling** and built **ML recommendation systems** supporting **loyalty programs** and **offers**

PROJECTS

Bitcoin News Keyword Trend Analysis

Feb 2025 – May 2025

- Built an **NLP pipeline** using **TextBlob** and **NewsAPI** to match **news keywords** with **CoinGecko** price data
- Merged and cleaned datasets with **pandas** and ran **Granger causality tests** to analyze keyword-price relationships
- **Containerized** the app with **Docker** and deployed an **interactive dashboard** for **sentiment signals** and **live Bitcoin prices**
- Visualized keyword–price trends using **Matplotlib** and **Seaborn**, revealing market sentiment influence on volatility

AI-Powered Stock Trading Bot

Nov 2024 – Jan 2025

- Trained a **DQN agent** in **TensorFlow** on market indicators (**EMA**, **MACD**) to optimize trade entry and exit
- Simulated live trading using a **custom backtesting** setup and integrated **REST APIs** for real-time data
- Applied **NumPy** for **time-series** transformations and shaped rewards to improve long-term portfolio stability

Handwritten Character Recognition

Feb 2023 – June 2024

- Built a mobile OCR app using **Flutter** and **Google ML Kit** to recognize handwritten characters in real time
- Applied **OpenCV** techniques (grayscale, binarization, contours) for preprocessing handwritten input
- Deployed and tested app via **Android Studio**, optimizing for **on-device inference**, model size, and UI responsiveness

PUBLICATIONS

- Co-authored "[Review on Handwritten Character Recognition](#)", published in [IJIRCCE](#), Vol. 11, Issue 3, March 2023, DOI: 10.15680/IJIRCCE.2023.1103081.

SKILLS

Programming Languages: Python, R, SQL, C++, JavaScript, HTML

Data Analysis & Visualization: Pandas, NumPy, Matplotlib, Seaborn, Plotly, Tableau

Machine Learning & Deep Learning: Scikit-learn, TensorFlow, PyTorch, OpenCV, DSPy, DQN

AI Domains & Techniques: NLP, LLMs, Reinforcement Learning, Generative AI, Recommendation Systems, Model

Cloud & Big Data: Google Cloud (BigQuery, Cloud Functions), AWS, Apache Airflow, Hadoop, Spark

Web & Backend Development: Django, Flask, Celery, REST APIs, WebSockets

Tools & Platforms: Docker, Git, Jupyter, VS Code, Excel, PowerPoint, Jira

CERTIFICATIONS

Artificial Intelligence Fundamentals – IBM | Big Data 101 – IBM | Data Analytics & Visualization – Accenture |

Databases for Developers – Oracle | Hadoop 101 – IBM