

# Shrivatsasingh Rathore

Arizona, Tempe | +1 (480) 703-7417 | [srathor9@asu.edu](mailto:srathor9@asu.edu) | [LinkedIn](#) | <https://github.com/SThor07>

## Education

### Arizona State University

Aug 2024 - May 2026

*Master of Science, Data Science, Analytics and Engineering*

- **Coursework:** Data Visualization, Data mining, Processing Data at Scale, Statistics for Data Analyst, Information Security and Assurance

### Savitribai Phule Pune University (University of Pune)

Sep 2020 - Jun 2024

*Bachelor of Engineering, Computer Engineering*

GPA: 3.46/4

- **Coursework:** Software Engineering, Data Structures and Algorithms, Systems Programming and Operating Systems, Object Oriented Programming, Database Systems, Big Data Analytics, Artificial Intelligence, Machine Learning, Deep Learning

## Projects

### F1 RAG Chatbot | Retrieval-Augmented Generation Chatbot for Formula 1

Jun 2025 - Jul 2025

- Built a **RAG** chatbot with **LangChain.js**, **Next.js**, **Vercel**, and **OpenAI**, enabling real-time Q&A over structured F1 data.
- Integrated **DataStax Astra DB** and vector embeddings to deliver fast, contextually relevant responses in production deployment.

### Smart-Based Book Recommendation System | LLM Integration, Sentiment Analysis

May 2025 - Jun 2025

- Developed an interactive book recommendation system using **Gradio**, handling over **7,000 book** entries and providing recommendations based on semantic similarity to user queries with **78% accuracy**.
- Integrated **LangChain** and **OpenAI** embeddings to build a vector search database using Chroma, reducing query processing time by 40% compared to traditional keyword-based search methods.

### Augmented Analytics Platform

Apr 2025 - May 2025

- Engineered a **Streamlit** dashboard analyzing **10,000+ retail transactions**, automating **KPI tracking and trend visualization** to accelerate decision-making.
- Automated insight generation with **ydata-profiling** and custom **NLG templates**, reducing manual reporting time by **80%**.

### CrimeNet | Urban Crime Hotspot Detection with GNNs

Jan 2025 - Mar 2025

- Designed and implemented a **predictive pipeline** to classify crime hotspots using **500,000+ Phoenix PD incident records**, achieving model accuracy of **84% on validation data**.
- **Leveraged SHAP** for feature importance analysis, delivering clear insights to academic evaluators and supporting practical recommendations for law enforcement resource allocation.
- Utilized **graph neural networks** to model spatial dependencies and improve predictions.

### Ride Wise

Jan 2025 - Mar 2025

- Developed and validated **ML models on over 1 million ride** records to forecast demand, achieving **RB2 scores of 0.92-0.95** and reducing forecast error by 25% compared to baseline
- Applied **SHAP for model explainability**, identifying top demand drivers and supporting promotion experiments that resulted in improved user engagement in test deployments.
- Validated models in simulated environments, demonstrating potential to improve engagement.

## Experience

### Dr. D. Y. Patil Unitech Society

Jan 2024 - Jun 2024

*Research Assistant*

- Designed and implemented a cloud-based database system, enhancing data retrieval speed by 40% and improving research efficiency.
- **Developed RESTful APIs** to automate data collection and processing, reducing manual workload by 30% and increasing system reliability.
- Built predictive analytics models leveraging **machine learning** to identify trends in customer data, contributing to a 20% increase in decision-making accuracy.

### Bajaj Auto Lmt

Feb 2023 - Mar 2023

*Engineering Intern*

- Conducted financial performance analysis to identify key profitability drivers and recommended operational improvements, leading to more informed business strategies
- Developed **Power BI** dashboards to track business metrics, reducing reporting inefficiencies by 40% and enhancing strategic decision-making.
- **Automated data** collection and analysis processes to optimize category performance evaluation and reduce manual efforts by 30%.
- Created insightful data visualizations that enhanced decision-making and clearly communicated analytical findings.

## Publications

- Shrivatsasingh Khushal Rathore, Plant Disease Detection and Classification System, IJERT, Vol. 13(5), May 2024. DOI: 10.17577/IJERTV13IS050170.

## Technical Skills

- **Programming Languages:** Python, C++, SQL, HTML, CSS, JavaScript
- **Tools and Platforms:** TensorFlow, Keras, OpenCV, Mediapipe, NLTK, NumPy, Pandas, Scikit-Learn, Matplotlib, Seaborn, Gradio, Flet, VS Code, Git, GitHub, XAMPP, DALL-E 2 API, REST APIs, Firecrawl, React, PowerBI, Tableau, Colab, Jupyter Notebook, Snowflake, MongoDB, Streamlit
- **Other:** Natural Language Processing, Computer Vision, Data Visualization, Data Pipelines, Data Analytics, Web Scraping, HTTP Requests, Browser DevTools, SEO, Google Workspace, Microsoft Office, Communication Skills, Collaborative Skills, Prompt Engineering, LLM-Based Development, SHAP, Fluent in English, Eager to Learn