Shrivatsasingh Rathore

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Education

Arizona State University **Aug 2024 - May 2026**

Master of Science, Data Science, Analytics and Engineering (GPA: 3.63)

- **Coursework:** Analyzing Big Data, Processing Data at Scale, Data Visualization, Data mining, Statistics for Data Analyst, Information Security and Assurance, Statistical Machine Learning, Computing Data-Driven Optimization

Savitribai Phule Pune University (University of Pune) **Sep 2020 - Jun 2024**

Bachelor of Engineering, Computer Engineering (GPA: 3.46)

- **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

Experience

Superstars Inc | *Software Developer Intern* **Sep 2025 - Dec 2025**

- Developed a cross-platform mobile application using Flutter, Dart, HTML/CSS, and JavaScript, implementing a unified search architecture with multi-tab navigation (People, Media, Jobs, All), improving UI/UX consistency and application scalability.
- Integrated frontend components with backend services by extending search APIs and data models, enabling media search, content discovery, and real-time query handling, with optimized performance using debounced search, cached network images, and asynchronous state management.
- Enhanced application performance, navigation reliability, and user experience by resolving UI state bugs, implementing context-aware navigation logic, and collaborating in agile sprints with product leadership and engineers, supported by API testing and validation using Postman.

Dr. D. Y. Patil Unitech Society | *Research Assistant* **Jan 2024 - Jun 2024**

- 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 | *Engineering Intern* **Feb 2023 - Mar 2023**

- 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 improving data management.

Projects

AutoDroid_QA: Autonomous Mobile QA System | Python, Ollama, AI, LLM Agents **Jun 2025 - Aug 2025**

- Built an LLM-powered multi-agent system that autonomously tests Android apps end-to-end including goal planning, UI interaction, verification, and reporting using Ollama, AndroidEnv, and custom agents
- Engineered 4 AI modular agents: Planner, Executor, Verifier, and Supervisor, enabling seamless coordination for test planning, execution, feedback, and logging through natural language interfaces.

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.

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.

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, Sreamlit
- **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