

# Harshit Mehra

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## Education

### University of Arizona, Tucson, AZ, USA

Aug 2023 - Dec 2024

Master of Science in Data Science

- GPA: 3.5/4
- Relevant Coursework: SQL/NoSQL, Data Mining, Data Visualization, Cloud Computing, Project Management

### Lakshmi Narain College of Technology, Bhopal, MP, India

Sept 2019 - May 2023

Bachelor of Technology in Computer Science

- CGPA: 8.25/10
- Relevant Coursework: Data Structures & Algorithms, DBMS, Object Oriented Programming, Operation system

## Skills

- **Programming Languages:** Python, SQL, R
- **Visualization & Reporting:** Tableau, Power BI, MS Excel
- **Databases:** PostgreSQL, MySQL, ETL
- **Data Processing & Analysis:** Data Mining, Statistical Analysis, SQL Query Optimization

## Certification

- **PostgreSQL for Everybody** – University of Michigan (Coursera)
- **Machine Learning Foundations** – University of Washington (Coursera)
- **Web Development** - University of Michigan (Coursera)
- **Cisco Certifications:** Cyber Security Essentials, Introduction to Cybersecurity, Introduction to Packet Tracer

## Internship

### Data Analyst Intern

Landmark Ventures, Bhopal, India

June 2022 – Aug 2022

- Developed interactive Tableau dashboards for real estate sales and market insights.
- Analyzed customer trends and sales data using SQL and Python to optimize pricing strategies.
- Conducted market research using Excel and Power BI to identify real estate trends and competitor benchmarks.
- Cleaned and preprocessed large datasets from multiple sources for accurate reporting.

## Projects

### YouTube Tag Recommender System

March 2025

- Built an AI-powered system to suggest YouTube tags using **300+** video titles and descriptions.
- Implemented TF-IDF and zero-shot classification with Transformers to extract 3–5 relevant tags per video.
- Deployed a modular Python pipeline with a Streamlit app for interactive tag-based search.
- **Tech:** Python, HuggingFace, Transformers, TF-IDF, Pandas, Streamlit.

### Semantic Search System – Online Retail Catalog

December 2024

- Worked on building a smart search system for **1.3M+** retail products using natural language queries.
- Built and benchmarked BM25 search in **Elasticsearch**; compared with **Sentence Transformers**.
- Evaluated performance using Precision@K and Recall@K on curated product data.
- **Tech:** Python, Elasticsearch, Sentence Transformers, PostgreSQL.

### AI Snake Game – Pathfinding & Reinforcement Learning

October 2024

- Developed a playable Snake game with AI agents using **BFS**, **A\***, and **Q-learning** for movement and survival.
- Visualized agent decision-making in real time to demonstrate shortest-path navigation and reward optimization.
- Implemented Q-learning with **epsilon-greedy strategy** to train the snake agent for long-term survival.
- **Tech:** Python, BFS, A\*, Q-learning, Pygame.