

AMAN GUPTA

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Education

- **VIT Chennai** - B.Tech CSE with specialization in AI and Robotics (CGPA:9.11) (2020 - 2024)
- **St. Xavier's School Bhopal** - CBSE 12th grade (Percentage : 88.0) (2019)
- **St. Xavier's School Bhopal** - CBSE 12th grade (Percentage : 87.4) (2017)

Experience

Center for Cyber-Physical Systems

May 2023 - June 2023

Summer Research Intern

[Certificate](#)

- Deployed an app that give crop suggestions based on location and satellite images considering over 25 attributes.
- Discovered precise crop suitability and cultivable land using generative AI models with an accuracy of 92%.
- Synthesized research findings from diverse sources, and published a research paper, documenting the progress.

Center for Advanced Data Science

June 2021 - July 2021

Research Intern

[Certificate](#)

- Utilized Robocorp's web recording tool , generating 50 reusable keywords for various test steps.
- Leveraged Robocorp's RPA capabilities and Python libraries to build a robust automated testing framework.
- Freed up 24 developer hours per week (equivalent to 1.2 full-time developers) for core development tasks.

Projects

Netflix Alchemy Engine | *PySpark, SQL, Azure Databricks, Azure Data Lake, NLP*

[Github](#)

- Designed and implemented an automated ETL data pipeline using Azure data engineering tools with orchestration.
- Reduced data transformation and ingestion time by 70% through parallelization techniques and ADF scheduling tools.
- Integrated Azure Cognitive Services for developing a recommendation system for Netflix shows with 89% convergence.

Finance Portfolio Optimization AI | *Python, Gym, scikit-learn, Reinforcement Learning, PyTorch*

[Github](#)

- Engineered an trading environment using Gym and OpenAI to make informed trading decisions with 87.2% accuracy.
- Evaluated performance over a backtesting period, achieving return of 18% compared to a buy-and-hold strategy's 10%.
- Tested the system with live trading data, after training it with 1,00,000 data points using python RL libraries.

Risk Assessment System | *TensorFlow, Pandas, MySQL, Sentiment Analysis*

[Github](#)

- Designed a hybrid LSTM-RNN model, achieving 92.1% accuracy for anxiety and 93.9% for depression prediction.
- Reduced text noise and inconsistencies by 25% through stop-word removal, stemming, and lemmatization.
- Increased model generalizability by 12% on a held-out dataset from a different platform, demonstrating its adaptability.

Online Streaming Analytics | *R, Numpy, Pandas, Data Analytics, EDA*

[Github](#)

- Built a Random Forest model to predict high-growth streamers with 82% accuracy, helping sponsors find future stars.
- Discovered a correlation between viewer engagement and streamer follower growth rate (Pearson's $r = 0.81$).
- Identified a potential market opportunity for a Twitch analytics tool for streamers, leveraging data visualization.

Publications

- GIS-Based Discovery of Fertile Land, Weather APIs, and GPT Crop Suitability Analysis (under review)
- A New Security Mechanism for Secured Communications Using Steganography and CBA [Research paper](#)

Achievements / Certifications

DeepLearning.AI: TensorFlow Developer Certification

[Certificate](#)

TechnoVIT'22 hackathon winners: 24 hour offline hackathon during biggest tech fest by VIT

[Certificate](#)

Meritorious Award: achieving a top 10 ranking for academic excellence within my branch

[Certificate](#)

NPTEL: Google cloud computing foundations

[Certificate](#)

Technical Skills

Languages: Python & R (proficient), SQL (fluent)

Libraries and Frameworks: Sklearn, TensorFlow, Keras, R Shiny, Pandas, Matplotlib, PyTorch, OpenCV

Technologies: MySQL, Docker, GitHub, Apache Spark, PySpark, Azure Databricks