

AAGAM PARAG SHAH

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EDUCATION

University of Illinois, Urbana-Champaign, USA

August 2025 - May 2027

Master of Science in Information Management

- **Relevant Coursework:** Data Science, Information & Statistics, Data Warehousing & Visualizations

Manipal University, Jaipur, India

July 2019 - July 2023

Bachelor of Technology in Computer & Communication (Minors: **Data Science**)

CGPA: 8.8/10

- **Relevant Coursework:** Object Oriented Programming, Operating Systems, Data Structures and Algorithms, Computer Networks, Data Analysis, Machine Learning, Database Management

SKILLS

Programming/ Scripting Languages: Python, SQL, C, C++, JavaScript, HTML, CSS, Perl, Bash, R

Tools, Platforms and Frameworks: Django, REST API, Arduino, PHP, Linux, GitHub, Git, VS Code

ML & Data Science: Scikit-Learn, TensorFlow, Keras, Pandas, NumPy, Feature Engineering, Model Deployment, NLP, Langchain

Visualization & Tools: BusinessObjects, Tableau, Power BI, Streamlit, Git/GitHub, Docker, Jupyter, Linux, Splunk

WORK EXPERIENCE

Cisco Systems, Bangalore, India

Aug 2023 - July 2025

Technical Consulting Engineer - Network Security

- Engineered automated data processing pipelines analyzing **500+** daily production events from distributed **logging systems (Splunk)**, **reducing** pipeline failures **60%** through **ETL** workflows and data quality validation.
- Architected production ML system for **automated packet analysis** achieving **80%** classification **accuracy** on **10K+** daily captures using Python, PyShark, **Langchain**, and **NLP models**; implemented end-to-end pipeline with data preprocessing, feature engineering, and real-time inference **API** via **Streamlit**.
- Built scalable log analysis infrastructure processing **100K+ network events** daily with data **cleaning**, **transformation**, and **aggregation** pipelines achieving **90% accuracy**: optimized query performance by **40%**.

Cisco Systems, Bangalore, India

Jan 2023 - July 2023

Technical Intern

- Developed AI-powered **chatbot** with Python and ML for document search and ticket routing, achieving **90% user satisfaction** and **85% classification accuracy**; built data pipeline processing **1K+** daily queries with NLP-based intent classification.
- Designed database schema and **ETL** processes for conversation history storage; deployed **REST API** for real-time model inference on cloud infrastructure with **24/7** availability.

PROJECTS

COVID-19 Data Pipeline & Analytics Platform

Jan 2023 - June 2023

Tech: Python (Pandas, NumPy), MS SQL Server, Tableau, ETL, Data Modeling, Star Schema

- Designed end-to-end ETL pipeline processing **1M+** records from multiple datasets (Our World in Data, WHO) with **automated** data ingestion, validation, and transformation using Python **Pandas**.
- Built dimensional data warehouse in **MS SQL** with star schema supporting **20+** analytical queries; implemented data quality framework ensuring **99.5%** accuracy across **50+** countries.
- Created **Tableau** dashboards with **5+ visualizations** for mortality trends and vaccination analysis.

Real-Time ML Drowsiness Detection System

Sept 2021 - Dec 2021

Tech: Python, TensorFlow, Keras, OpenCV, Feature Engineering, Model Deployment

- Developed deep learning model achieving **90%** accuracy on **1,000+** images using **TensorFlow/Keras**; built **ML pipeline** with data preprocessing and **feature engineering** (facial landmarks, eye aspect ratio) as team lead.
- Implemented **data augmentation** increasing dataset by **300%**, reducing overfitting **25%**; designed **real-time** inference system processing 30 FPS.

Data Engineering Projects (UIUC)

Ongoing

- **Interactive** BI dashboards to detect phishing **trends** and domain-level risks using the *PhiUSIIL* Phishing URL Dataset using Python **ETL** and **Power BI**.
- Data-driven income classification to enhance customer segmentation & marketing strategy optimization.

CERTIFICATION and AWARDS

- **Google** Data Analytics Professional | **Cisco** Generative AI | **Cisco** DevNet Associate | **Cisco** CCNA
- Cisco TTH CTF Finalist (2025) | JPMorgan CodeForGood Finalist (2022) | IEEE CTF Winner (2022)

RESEARCH & LEADERSHIP

Metaheuristic Algorithms for Cloud Task Scheduling

Feb 2022 – July 2022

- Developed metaheuristic algorithms achieving **85%** efficiency with **80%** resource utilization to minimize resource consumption and improve system performance over existing methods.

Treasurer, MUJ ACM Student Chapter

May 2021 – May 2022

- **Recognized:** ACM **Outstanding** Chapter Award (2021-22), Best **Recruitment** Award **Globally** (2021-22)