

# Bhavya Kandhari

[Email](#) | [LinkedIn](#) | [GitHub](#) | [Portfolio](#)

## EDUCATION

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### Arizona State University

Master's in Computer Science CGPA: 3.92/4

Tempe, Arizona

Aug 2023 - May 2025

### Amity University

Bachelor of Technology in Computer Science CGPA: 8.17/10

India

Aug 2017 - May 2021

## EXPERIENCE

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### Technology Consultant (Data Analyst)

Sep 2021 - July 2023

Ernst & Young, Global Delivery Services

India

- Spearheaded development and quality improvement of KPIs and lead discussions across 6 different functions over a 1 year period to contextualize and define cyber-security metrics, resulting in enhancement in KPI Quality.
- Designed upper and lower thresholds by implementing statistical and time series models to catch anomalies in data quality to increase the efficiency of launching investigations by 20%.
- Developed and clearly documented automation development of processing IP addresses and finding organizational information using AWS Redshift, Glue, Lambda and Secret Manager to reduce process cycle time by 1.5 hours/day.
- Created column profile of data quality utilizing AWS Glue ETL pipeline and displayed statistical information regarding data distribution through AWS Quicksight for quality monitoring and improvement.
- Accomplished approximately 65% mapping of the CVEs from NVD Database to MITRE framework by integrating CAPEC database to model adversaries tactics and techniques.

## TECHNICAL PROJECTS

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### Git Implementation | [Link](#) | *Python*

Marc 2025 - Mar 2025

- Developed a functional subset of Git core features in Python, including repository initialization and object management (blob, tree, commit).
- Implemented Git's object model using SHA-1 hashing for content addressing and zlib for compression/decompression.
- Built HTTP cloning capabilities, involving remote ref fetching, packfile parsing, delta resolution, and working directory checkout.

### Simplified Alignment in LLMs | [Link](#) | *Trl, Transformers, Torch*

Aug 2024 - Dec 2024

- Implemented Direct Preference Optimization (DPO) on the Meta Llama models using the ELI5 dataset, achieving a 6% improvement in reasoning accuracy.
- Preprocessed and tokenized datasets for alignment, structuring question-response pairs to optimize input for clarity and coherence.
- Evaluated performance using GSM8K (mathematical reasoning) and MMLU (multi-domain reasoning) benchmarks, balancing reasoning depth and user-friendliness.

### Video Reconstruction from Randomized Frames | [Link](#) | *OpenCV, Numpy, Matplotlib*

Nov 2023 - Dec 2023

- Engineered a preprocessing solution that reduced video data complexity through grayscaling and downsampling.
- Enhanced feature detection accuracy by adapting ORB and SURF algorithms, optimizing the frame reordering process for video sequences. Developed and tested 3 sorting algorithms to efficiently sequence video frames based on number of feature matches.
- Implemented a logistic and sequential performance metric that demonstrated improvement in frame sequencing accuracy compared to existing methods.

## TECHNICAL SKILLS

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**Languages:** Python, JavaScript

**Frameworks:** React, Node.js, Express.js, Mongoose

**Data Visualization Tools:** Power BI, AWS Quicksight, Tableau

**Databases:** PostgreSQL, MongoDB

**Cloud Computing:** Amazon Web Services

**Libraries:** Scikit-Learn, Pandas, NumPy, PySpark, Seaborn, Plotly

**Developer Tools:** Git, Postman (API Testing), JSON