Bhavya Kandhari

Email | LinkedIn | GitHub | Portfolio

EDUCATION

Arizona State University	Tempe, Arizona
Master's in Computer Science CGPA: 3.92/4	*Aug 2023 - May 2025*
Amity University	India
Bachelor of Technology in Computer Science CGPA: 8.17/10	*Aug 2017 - May 2021*

EXPERIENCE

Technology Consultant (Data Analyst)	Sep 2021 - July 2023
Ernst & Young, Global Delivery Services	*India*

- Collaborated with cross-functional teams to define and standardize cybersecurity KPIs, improving metric clarity and reporting quality across 6 departments.
- Designed and deployed anomaly detection models using time-series analysis to improve incident investigation efficiency by 20%.
- Automated IP enrichment workflows using AWS Redshift, AWS Glue, AWS Lambda, and Secrets Manager, reducing manual processing time by 1.5 hours per day.
- Built scalable ETL pipelines with AWS Glue and developed data profiling dashboards using AWS QuickSight to monitor data quality and distribution.
- Integrated NVD and CAPEC databases to map over 65% of CVEs to MITRE ATTACK framework, enhancing threat intelligence coverage.

TECHNICAL PROJECTS

Git Implementation | GitHub | *Python* — Mar 2025 - Mar 2025

- Recreated core Git operations (init, commit, tree, blob) using SHA-1 hashing and zlib compression for content addressing.
- Designed an object model to manage Git internals and built local repository functionality from scratch.
- Implemented HTTP remote cloning, including ref fetching, packfile parsing, and delta resolution for efficient file storage.

Simplified Alignment in LLMs | GitHub | *Trl, Transformers, Torch* — Aug 2024 - Dec 2024

- Fine-tuned LLaMA models using Direct Preference Optimization (DPO) with the ELI5 dataset for long-form QA tasks.
- Preprocessed and structured question–answer pairs by formatting prompts and responses to emphasize coherence, informativeness, and conversational tone for training stability.
- Evaluated the model's reasoning and generalization using GSM8K and MMLU benchmarks, achieving a 6% increase in reasoning accuracy and improved output alignment quality.

Video Reconstruction from Randomized Frames | GitHub | *OpenCV, Numpy* — Nov 2023 - Dec 2023

- Applied and compared ORB and SURF feature detectors to extract keypoints from randomized frames, selecting ORB based on computational efficiency and descriptor quality.
- Implemented three sorting strategies — Growth-based, Hierarchical Clustering, and a TSP-inspired approach — to reorder frames based on visual similarity, achieving improved temporal reconstruction.
- Developed and benchmarked sequencing accuracy using both the original logistic loss metric and a custom Sequential Order Error, validating improvements over baseline methods.

TECHNICAL SKILLS

Languages: Python, JavaScript, TypeScript
Frameworks/Libraries: React, Node.js, Express, FastAPI, Next.js, TailwindCSS
Databases: PostgreSQL, MongoDB
BI Tools: Power BI, AWS Quicksight, Tableau
Cloud & DevOps: AWS, Docker, Git/GitHub, Prometheus, Grafana, NGINX
Data Processing: Apache Flink, Spark, Kafka
Testing: PyTest, Cypress