

Atherv Vidhate

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EDUCATION

University of California, San Diego

La Jolla, CA

Bachelor of Science in Data Science

Expected Graduation: 2027

- Built Tau Kappa Epsilon alumni engagement portal using Next.js and React to support donations, networking, and access to chapter history for 1000+ members; implemented SDLC practices, conventional commits, and code review standards.

EXPERIENCE

Artificial Intelligence Intern

Jun 2025 – Present

smartQED

- Fine-tuned a diagnostic LLM on 200+ complex technical reports, significantly improving the model's reasoning capability and reducing root cause resolution time by 40% across product support cases.
- Integrated an AI analytics agent with remote SQLite database via Model Context Protocol, enabling real-time analysis pipelines and showcasing next-gen automation frameworks to senior leadership.
- Constructed a high-fidelity dataset for LLM training by sourcing, cleaning, and structuring over 2GB of raw aviation incident data to support high-accuracy safety prediction models.

Economics Lab Research Assistant

Apr 2025 – Jul 2025

UC San Diego Economics Department

- Engineered an open source data pipeline using the Library of Congress API to extract over 100,000 entries on historical newspaper coverage of 19th-century presidential campaigns.
- Developed Python scripts with API pagination and error recovery logic, ensuring 100% data retrieval completion across multi-page JSON responses and optimizing network efficiency.
- Analyzed relationships between historical newspaper titles by constructing directed graphs and applying connected components analysis to identify and group over 300 related publications.

Associate

Jan 2024 – Present

Triton Consulting Group

- Audited client's product analytics platform and built a scalable, client-facing tagging infrastructure with 100+ unique tags across 20 categorized workflows, enabling long-term data flexibility.
- Initiated and led a targeted outreach campaign that connected with 40+ regional companies, securing new client partnerships and increasing project engagement by over 15%.
- Designed and delivered an interactive Tableau dashboard analyzing member demographics, retention patterns, and growth opportunities, driving data-backed engagement initiatives.

PROJECTS

Concert Scout AI — <https://concertscout.app>

- Built a full-stack AI-powered concert recommendation system using FastAPI and Next.js for over 150 users.
- Implemented a multi-agent AI pipeline using Gemini 2.0 Flash model to deliver personalized concert recommendations.
- Deployed a scalable backend infrastructure with Redis session management and analytics tracking.

Power Outage Analysis — <https://atherv.com/poweroutageanalysis>

- Conducted comprehensive data cleaning of a 1,500+ row dataset on U.S. power outages, transforming time-based data into structured formats and engineering 5 new features for enhanced analysis.
- Developed and optimized machine learning models to predict outage severity using Random Forest classifiers, achieving a 5% accuracy improvement between models through feature engineering and hyperparameter tuning.
- Conducted fairness analysis to evaluate model performance across state populations, ensuring equitable recall rates for severe outages in both high and low-population states, finding the model to be fair with high certainty.

MiniGit — <https://github.com/athervvidhate/minigit>

- Developed a custom version control system in Java, implementing 10+ Git commands with Hashmaps and serialization for efficient data persistence and version tracking.
- Optimized system performance using advanced data structures and algorithms, ensuring reliable file tracking, branching, and commit history for seamless version management.

TECHNICAL SKILLS

Programming Languages: Python, SQL, Java, TypeScript, JavaScript, HTML/CSS

Frameworks & Libraries: scikit-learn, pandas, FastAPI, Matplotlib, React, Tailwind, Spark, Dask

Tools & Platforms: Git, AWS, Redis, PostgreSQL, Tableau