Jayani Tripathi

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Education

University of Massachusetts Amherst Amherst, MA

Bachelor of Science in Data Science, Minor in Computer Science *Sep. 2021 – May 2025*

Chancellor's Award: Merit Based Scholarship, Dean's List: Fall 2023, Spring 2025

Relevant Coursework: Artificial Intelligence, Algorithms & Data Structures, Discrete Math, Business Analytics & Intelligence, Mobile Health Sensing and Analytics, Data Analytics with Python, Web Development, Statistics, Database Management, User Interface Design, Linux Operating Systems, Data Mining in Business, Object-Oriented Programming

Technical Skills

Languages: Python, JavaScript, CSS, HTML, SQL, R, Java
Frameworks & Libraries: TensorFlow, Keras, scikit-learn, Pandas, NumPy, OpenCV, D3.js
Tools & Platforms: AWS S3, MongoDB, Git, Tableau, Matplotlib, Seaborn

Work Experience

Software Engineering Intern Oct 2025 – Present

Koyal AI (Y Combinator Fall 2025) *San Francisco, CA*

- Built Koyal's agentic video engine with Claude-powered scene classifier, transforming single-model workflow to autonomous multi-model architecture achieving 100% video generation success through fallbacks.
- Engineered parallel Python pipeline to benchmark models across 1,400+ test cases with ThreadPoolExecutor, leveraging Claude classification and Rapidata for crowdsourced assessment to drive model selection decisions.
- Developed location consistency system extracting top 5 recurring environments to generate persistent 3D spaces, maintaining spatial coherence while enabling diverse camera movements.

Data Analyst Intern Jun 2024 – Sep 2024

NASSCOM: National Association of Software and Service Companies *Hybrid*

- Co-authored *"Advancing Healthcare in India: Navigating the transformative impact of AI"*
- Developed data visualizations using Excel, Tableau, and Python (pandas, matplotlib) to analyze trends and present insights from primary research.

Research and Development Intern Jun 2023 – Sep 2023

REMI: Regional Economic Models, Inc *Amherst, MA*

- Improved economic forecasting models and built client-facing visualizations that uncovered key economic trends across multiple policy and market scenarios.
- Boosted model accuracy and platform stability by testing forecasting tools, debugging code, and resolving client-reported issues, supporting 500+ users and contributing to a 10% increase in renewals.
- Transformed and analyzed government data using Excel and applied KNN imputation to address missing values; supported economic impact assessments for the State DOT project.

Leadership & Projects

Justice Through Data | Three Strikes and You're Out | *JavaScript, HTML, CSS* Mar 2025 - Apr 2025

- Built an interactive D3.js dashboard to visualize the impact of California's Three Strikes Law on incarceration trends, racial disparities, and poverty correlations using public datasets and custom data cleaning pipelines.
- Conducted exploratory data analysis and developed interactive choropleth maps, bar charts, scatter plots, and heatmaps to visualize justice system patterns for public and policy audiences. View the process book here.

Gradify.AI | Innovation Challenge, University of Massachusetts Amherst Mar 2025 - Apr 2025

- Selected as one of 24 companies out of 65 to compete in the Innovation Challenge, featuring a $65,000 prize pool.
- An AI-powered SaaS platform that automates GPA recalculations, replacing manual methods and streamlining admissions with accurate evaluations. Inspired by first-hand experience as Admissions Staff at UMass Amherst.
- Cut transcript processing costs by 76%, from $125,000 to $30,000 per cycle, while improving scalability.
- Reduced processing time by over 99%, from 5 months to minutes, enabling near-instant transcript evaluation.

Undergraduate Researcher: Sign Language Recognition | *Python, Machine Learning* Jun 2024 – Sep 2024

- Developed and trained a Convolutional Neural Network (CNN) for sign language recognition using the MNIST Sign Language dataset, utilizing TensorFlow and Keras frameworks. Achieved a model accuracy of over 98% by fine-tuning hyperparameters such as learning rate, batch size, and dropout rates.