

Bhargav Sairam

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Education

University of Colorado Boulder

Bachelor of Science in Computer Science (GPA: 3.78 / 4.00)

Expected May 2028

Boulder, Colorado

- **Honors:** Dean's List
- **Relevant Coursework:** Neural Networks, Data Structures, Algorithms, Operating Systems, Computer Systems, Software Development, Discrete Structures, Calculus I & II, Linear Algebra, Data Science, Database Systems

Experience

CACI International Inc.

AI/ML Intern

May 2026 – Present

Colorado Springs, Colorado

- Lead development of an end-to-end geospatial ML pipeline in Python (GeoPandas, rasterio, PyTorch, Google Earth Engine) fusing five OSINT signals (cartel-violence events, trafficking corridors, night-light anomalies, deforestation, and terrain slope) into a composite risk score, narrowing a 41,600-cell search grid over Mexico/Central America to 160 priority cells for satellite tasking.
- Engineered a 4-channel ResNet-50 classifier (RGB + near-infrared Sentinel-2 imagery, transfer learning, custom loss weighting for class imbalance) to detect airstrip-like structures, validated with 5-fold spatial cross-validation to eliminate geographic data leakage.
- Designed a geometry-based cascade filter (NDVI/NDWI spectral masking + shape descriptors from pixel moments) that cut false positives 95% downstream of the CNN, correctly identifying that classifier accuracy, not geometry, was never the binding constraint at real-world prevalence rates.

Namo Cloud Solutions

Software Engineering Intern + AI/ERP Integration

May 2025 – Aug 2025

Denver, Colorado

- Built and deployed a full-stack data integration pipeline linking NetSuite ERP with Google Cloud SQL, leveraging RESTlet APIs and OAuth 1.0 for secure authentication.
- Automated daily transactional data synchronization using Python, MySQL, and Google Cloud Scheduler, reducing manual reporting efforts by 90%.
- Designed and optimized staging databases to enable faster ERP data analysis and downstream AI/BI applications.

Navjoy Inc

Machine Learning & Research Intern

Mar 2022 – Feb 2023

Golden, Colorado

- Researched and implemented machine learning models (Decision Tree Classifier, scikit-learn, Pandas, NumPy) to predict resident behaviors and health risks in assisted living facilities.
- Developed a prototype early warning system to flag potential incidents (falls, deteriorating health), enabling caregivers to intervene proactively.
- Authored and published a research paper translating theoretical ML methods into practical healthcare applications, strengthening the scientific foundation of the project.
- Collaborated with caregivers and healthcare staff to analyze health and activity data, validate model predictions, and ensure clinical relevance.

Projects

MatchFlix | Node.js, Express.js, PostgreSQL, Docker, TMDB API, Gemini API, OpenAI API

- Developed a full-stack movie discovery platform with swipe-based interactions, enabling users to like/dislike movies and generate personalized watchlists.
- Engineered a collaborative "Swipe Session" feature allowing multiple users to match on shared movie preferences using backend logic in PostgreSQL.
- Integrated generative AI (Gemini, OpenAI) to analyze user behavior and deliver personalized movie recommendations.
- Designed and deployed RESTful APIs with secure authentication and containerized the application using Docker for consistent development and deployment.

Facial Recognition Attendance System | Python, OpenCV, face-recognition, NumPy, Pandas

- Developed facial recognition software to automate attendance tracking for KTP meetings, leveraging OpenCV and face-recognition for detection and identity verification.
- Increased efficiency and accuracy of attendance records by up to 80%, replacing manual sign-in with automated recognition.

Technical Skills

Languages: C++, C#, Python, JavaScript, Java, C, SQL, HTML/CSS

Technologies: PyTorch, TensorFlow, Scikit-Learn, XGBoost, Node.js, Express.js, CLI, CI/CD, OpenCV, NumPy, Pandas, Git, GitHub, Docker, GCP, MySQL, PostgreSQL, REST APIs, OAuth 1.0

Concepts: Data Structures & Algorithms, Machine Learning, Computer Vision, API Design, Database Design, Full-Stack Development