Guruprasad Parasnis

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https://garry-p12.github.io/Portfolio/

Ambitious Data Science master's candidate with **7 research papers in AI/ML.** Currently a Software Development
Engineer Intern at Amazon, where I design and deploy AI-driven APIs to enhance content moderation and metadata
filtering for Prime Video. Experienced in building scalable ML pipelines and integrating Agentic AI models into
production systems. Adept at cross-functional collaboration and rapid prototyping. I seek to leverage my skills in a
full time role in software development and machine learning

EDUCATION

University of California San Diego   **La Jolla,CA,USA**
Master of Science in Data Science (GPA : 3.9/4)   *Sept 2024 - Dec 2025*
Sardar Patel Institute of Technology   **Mumbai,MH,India**
Bachelor of Technology in Electronics and Telecommunication (GPA : 3.93/4)   *Aug 2020 - Jun 2024*

WORK EXPERIENCE

Amazon Prime Video   **Los Angeles, CA**
Software Development Engineer Intern   *June 2025 – Sept 2025*

- Built a production-grade Artwork Analysis API and its **AI agent** for Prime Video's **agentic platform** Reacher,
  automating moderation of metadata and images to ensure safe content delivery for kids based on movie visuals
- Developed scalable and maintainable backend services using **Java Spring Boot**, adhering to **SDLC** best practices,
  modular code design, Git-based workflows, and **CI/CD pipelines** for automated testing and deployment
- Integrated **Claude 4 Sonnet** via **Amazon Bedrock** with advanced prompting, cutting manual QA effort by **60%**
- Provisioned scalable, fault-tolerant infrastructure on **AWS ECS Fargate** using **TypeScript CDK**, incorporating
  Smithy-defined APIs, load-balanced service definitions, and full unit and integration test coverage for production
- Collaborated with content ops and catalog teams to enhance QA, improving child content safety and filtering

San Diego Supercomputer Center   **San Diego, CA**
Data Science Intern   *Apr 2025 – Jun 2025*

- Designed a hierarchical classification pipeline using supervised learning, achieving **89.7%**, **83.3%**, and **96.9%**
  accuracy for **PFT**, **Genus**, and **Species** prediction respectively, by leveraging ecological and spatial features
- Optimized end-to-end training and inference pipeline by streamlining data integration, preprocessing, and feature
  alignment across FIA and TLS sources; research accepted at the **54th ICPP 2025**
- Optimized ensemble methods (**RF**, **ET**, **XGBoost**) with class-aware loss to improve rare-class performance
- Curated a **benchmark dataset** in collaboration with **Los Alamos National Laboratory** for large-scale forest
  biodiversity and fire resilience research

Indian Institute of Technology Bombay, India
Research Intern   *Jan 2023 – Jun 2024*

- Developed a contactless fingerprint system for the Government of India, securing **$250K** for commercialization
- Built an Android application for contactless fingerprint recognition by integrating **multiresolution wavelet
  decomposition** into a **similarity learning-based CNN**, achieving a SOTA **EER of 2.5%**; results published in IEEE
- Designed a shearlet-contourlet network reducing training time by **33%**; published in 9th CVIP

Sardar Patel Institute of Technology, India
Research Assistant   *Jun 2023 – Dec 2023*

- Patented a DNN-based pothole detection and feature extraction system (**96%** accuracy); presented at IEEE
- Proposed a wavelet-GAN extractor with **18%** faster convergence; tested on 3 benchmarks and published in IEEE
- Invented a novel loss function boosting semantic segmentation on medical benchmarks by **25%**; published here
- Designed a model architecture with **Area Under Curve** > **98%** on medical benchmarks; reviewed in Springer

TECHNICAL SKILLS

Programming Languages: Python, Java, C++, SQL, OOPs, R
Libraries: TensorFlow, PyTorch, Sklearn, Pandas, Numpy, OpenCV, MATLAB, Power BI, SQL Workbench, Streamlit
Technologies: Machine Learning, Deep Learning, Computer Vision, Signal Processing, Large Language Models,
Vision Transformers, Vision Language Models, Git, Github, Java Springboot, AWS
Analytics: Linear Algebra, Calculus, Probability, Statistics, Data Mining, Feature Extraction, Data Visualization
Soft Skills: Teamwork, Leadership, Strategy