

Prajwal Pisal

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SUMMARY

Dynamic Test Engineer and independent AI/ML researcher driving high-performance software and hardware validation through rigorous automation, advanced debugging, and data-driven optimization. Expert in designing scalable test frameworks, analyzing complex system failures, and improving product reliability across enterprise-grade server environments. Strong foundation in machine learning research with peer-reviewed publications, applied model development, and innovative experimentation across deep learning, computer vision, and decision-support algorithms.

PROFESSIONAL EXPERIENCE

Test Engineer

Hyve Solutions – Fremont, CA | Sept 2023 to Present

- **Driving 80% Uptime Improvement:** Deliver advanced system diagnostics across large-scale Linux server platforms using Bash, Python, DMM tools, and hardware-level troubleshooting to stabilize operations.
- **Implementing 100+ Product Test Coverage:** Own end-to-end validation for enterprise servers and switches, executing functional and system-level testing strategies that ensure quality, performance, and deployment readiness.
- **Reducing Test Cycle Time by 30%:** Build and maintain automated testing frameworks that optimize regression execution, accelerate QA throughput, and strengthen overall software reliability.
- **Cutting Critical Incidents by 20%:** Conduct deep failure analysis and root-cause investigations using network diagnostics, log evaluation, and hardware debugging to enhance system stability.
- **Restoring 5,000+ Server Operations in Crisis:** Lead emergency failure-recovery initiatives at the Hyve KY CVG branch through rapid debugging, system optimization, and cross-functional escalation coordination.
- **Mentoring 15+ Junior Engineers:** Train and upskill team members in Linux command-line workflows, test automation, equipment handling, and engineering best practices to build stronger technical capability.
- **Leveraging Enterprise Tools:** Utilize JIRA, MS Teams, Excel, Putty, and Linux-based utilities to manage workflows, document findings, and improve test process transparency.
- **Currently developing an internal AI-driven debug recommendation system** using Large Language Models (LLMs) and graph signals to convert failure logs into actionable root-cause hypotheses for hyperscale server infrastructure.

Software Engineer Intern

CodeDay – Seaside, CA | Jan 2023 to Feb 2023

- **Improving User Experience by 10%:** Enhanced FreeCodeCamp Classroom's user interface using Next.js, HTML, CSS, and localStorage-based state persistence to streamline navigation for a 40,000+ user community.
- **Modernizing Web Components:** Delivered optimized layouts and interactive profile functionality that strengthened usability and contributed to higher engagement metrics.

EDUCATION

Bachelor of Science in Computer Science

California State University Monterey Bay – Seaside, CA | May 2023

- **Achieving 3.69 GPA Cum Laude:** Completed a Software Engineering concentration with strong academic performance recognized through honors awards and consistent **Dean's List placement**.
- **Ranking in ICPC Competition:** Participated in the 2022 ICPC Pacific Northwest Division 2 programming contest.

- **Building Engineering Foundations:** Completed advanced coursework in Data Structures, Algorithms, Software Engineering, Operating Systems, Microprocessor Architecture, Embedded Systems, Web Development, Internet Programming, and Database Management.
- **Strengthening Campus Engagement:** Participated in the CSUMB Programming Team, International Club, **CTI Accelerate** Program, and IEEE activities to expand technical exposure and collaborative experience.

RESEARCH & PUBLICATIONS

Journal Papers

1. **Pisal, P., Reddy, K. K., Kishore, J., Jonnalagadda, R. R., Kumar, M., Band, G., Joshi, B. P.**
An Integrated TOPSIS and ARAS Method Multi Criteria Decision Making Approach for Optimizing Investment Portfolios Using Goal Programming and Genetic Algorithm Model.
Scientific Reports, Springer Nature, Impact Factor 3.9.
Paper published | [DOI Link](#)
2. **Pisal, P., Jadhav, A.**
Enhancing Brain Tumor Diagnosis with Ensemble Deep Learning and Optimizer Tuning on MRI Data.
Scientific Reports, Springer Nature, Impact Factor 3.9.
Revision submitted, under review.
3. **Pisal, P., Jadhav, A.**
Pathological Speech Synthesis: A Framework and Performance Analysis.
IEEE Access, Impact Factor 3.6.
Paper accepted, revisions in progress.

Conference Papers

1. **Jadhav, A., Pisal, P.**
Harnessing Kernel Tricks for Nonlinear Problem Solving: SVM Applications.
IRASET 2025 International Conference on Innovative Research in Applied Science Engineering and Technology, Fez Morocco.
Paper accepted, presented May 2025. Published May 2025 | [DOI Link](#)
2. **Pisal, P., Kishore, J., Joshi, B. P., Goyal, S.**
Detection of Nanoparticles with Machine Learning Technique: Evaluation of Algorithm Performance.
ICSIT 2025 IEEE International Conference on Sustainability Innovation and Technology, Maharashtra India.
Paper accepted, presented August 2025. Published December 2025 | [DOI Link](#)
3. **Pisal, P., Jalan, P., Chigurupati, S. R., Puligundla, C., Bhogavalli, S.**
Integrating LLMs for Automated Bug Triaging and Root Cause Localization in Software Systems.
AIBThings 2025 IEEE 3rd International Conference on Artificial Intelligence Blockchain and Internet of Things, Central Michigan University, USA.
Paper accepted, presented September 2025. Published December 2025 | [DOI Link](#)
4. **Pisal, P., Gupta, N., Ambavaram, R. R., Jadhav, A., Mahendran, P. K. R.**
CodeProphet: A Predictive LLM Based Framework for Proactive Software Development Planning.
AIBThings 2025 IEEE 3rd International Conference on Artificial Intelligence Blockchain and Internet of Things, Central Michigan University, USA.
Paper accepted, presented September 2025. Published December 2025 | [DOI Link](#)
5. **Pisal, P., Varshney, N., Chamoli, A. S., Singh, A.**
Prediction of Water Quality Using Machine Learning and Artificial Intelligence Techniques.
ISCON 2025 IEEE International Conference on Information Systems and Computer Networks, Mathura, Uttar Pradesh, India.
Paper accepted and presented September 2025. Publication in progress.

PROFESSIONAL SERVICE

Peer Review Activities

- **Reviewer, CE2CT 2025**
IEEE First International Conference on Advances in Computer Science, Electrical, Electronics, and Communication Technologies, Uttarakhand India.
- Reviewed one research paper.
- **Reviewer, IBRL Workshop at RLC 2025**
Inductive Biases in Reinforcement Learning Workshop at the 2nd Reinforcement Learning Conference, University of Alberta Canada.
- Reviewed one research paper.
- **Reviewer, AI4Math Workshop at ICML 2025**
Second AI for Math Workshop at the 42nd International Conference on Machine Learning, Vancouver Canada.
- Reviewed two research papers.
- **Reviewer, ACM SIGCSE Technical Symposium 2026**
Association for Computing Machinery Special Interest Group on Computer Science Education Technical Symposium, Missouri USA.
- Reviewed six research papers.
- **Reviewer, Efficient Reasoning Workshop at NeurIPS 2025**
Efficient Reasoning Workshop at the Conference on Neural Information Processing Systems.
- Reviewed one research paper.

Judging Activities

- **Judge, NASA GL4HS 2025 Capstone Symposium**
Served as a judge for more than twelve high school research poster presentations evaluating scientific methodology, technical rigor, and presentation quality.

PROFESSIONAL PROJECTS

AI Powered NGO Claim Verifier | [Link](#)

- Python, API, Machine Learning, FastAPI
- Capstone Project, April 2023
- Built an automated NGO verification system with multi source cross validation and a custom NLP engine optimized for sub fifty millisecond extraction. Implemented a parallel FastAPI pipeline with modular components and structured logging achieving full workflow performance under two seconds.

Crisp | [Link](#)

- ReactJS, TypeScript, Redux, Tailwind CSS, NodeJS, API
- Software Development Project, October 2023
- Developed an AI web application for rapid article summarization using GPT Model 4 with RTK Query.

Forest Fire Detection System

- Python, Machine Learning, API, React
- Capstone Project, April 2023
Created an ML model processing more than four thousand images for wildfire detection and achieved eighty eight percent validation accuracy with a React interface for instant alerts.

Sorting Algorithm Visualizer | [GitHub Link](#)

- Java, Swing, IntelliJ IDEA
- Software Engineering Project, December 2022
- Developed an algorithm visualization tool with ninety nine percent improved clarity and features including two hundred percent speed selection and optimized multi-threading.

VOLUNTEER EXPERIENCE

Software Developer

Partners for Peace – California | September 2022 to December 2022

- **Driving Ninety Percent Navigation Improvement:** Enhanced website structure, responsiveness, and content quality resulting in a ninety percent increase in usability.
- **Boosting Social Presence by Eighty Five Percent:** Strengthened online visibility through refined layouts, improved interactions, and optimized content strategy.
- **Increasing Engagement by Ninety Five Percent:** Delivered full Spanish translation to expand accessibility and elevate user participation.

Software Development Mentor

Girl Scouts of California's Central Coast – California | January 2022 to April 2022

- **Mentoring More Than Ten Students:** Taught coding fundamentals, programming logic, and cybersecurity concepts to Girl Scouts through structured learning sessions.

Conference Volunteer Co Lead | [ISTAS 2025 Conference Volunteer Team](#)

IEEE ISTAS 2025 Conference, Santa Clara University – California | August 2025 to September 2025

- **Coordinating End to End Conference Operations:** Supported session execution by overseeing volunteer teams and ensuring timely workflow coordination.

CERTIFICATIONS

- **Microsoft Certified Azure Data Scientist Associate**, Microsoft | [Credential Link](#)
- **Certified Secure Computer User v2**, EC Council
- **AWS Cloud Practitioner Essentials**, Coursera

TECHNICAL SKILLS & CORE COMPETENCIES

- **Test Engineering and Quality Assurance:** System Validation, Automated Testing, Failure Analysis, Regression Testing, Test Script Development, ATE Tools, BIOS and BOM Validation, Oracle x86 Server Debugging, QA Process Optimization, Test Engineering Workflows
- **Software Engineering and Development:** Java, Python, JavaScript, TypeScript, HTML, CSS, React, ReactJS, NextJS, HTML5, .NET, RESTful API Development, Selenium, SOAP, Algorithm Design, Code Optimization, IntelliJ IDEA, VS Code
- **AI and Machine Learning Expertise:** Deep Learning, Natural Language Processing, Computer Vision, Model Training and Evaluation, Ensemble Methods, Data Preprocessing, NumPy, ML Pipeline Development, Tableau, MS Power BI
- **Systems, Networking, and Infrastructure:** Linux, Windows, Mac OS, TCP and IP, FTP, VLAN, Subnetting, Ethernet, OSI Model, Firewall Configuration, Switching, Routing, VPN, Putty, CI and CD Practices, AWS, Installation and Maintenance of Cisco 9336c fx2 and Related Switches and Routers, MySQL Server, PostgreSQL, Git, GitHub
- **Collaboration, Tooling, and Leadership:** JIRA, Microsoft Teams, Microsoft Excel, Microsoft Office, Microsoft 365 Power Apps, Technical Documentation, Cross Functional Communication, Stakeholder Coordination, Problem Solving, Critical Thinking, Analytical Skills, Team Collaboration, Mentorship and Training, Can Do Attitude

INTERESTS

- Taekwondo, Football, Cooking, Reading