Prajwal Pisal

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SUMMARY

Results-driven and self-motivated **Software Engineer** with **2+** years of experience, Test Engineer, Accomplished Mentor, crafting robust software solutions with a diverse technical skill set to deliver business useful insights. Currently excelling as **Test Engineer** at **Hyve Solutions**, having a proven track record in the development and implementation of test processes, the development of automated software and server test scripts and the analysis of failure reports to improve system reliability and product quality. Successfully trained & mentored **15+** junior employees across multiple company branches.

EDUCATION

- **California State University, Monterey Bay** | **Bachelor of Science in Computer Science**   May 2023
  - Concentration: Software Engineering
  - GPA: 3.7/4.0, Academic Honors Distinction: Cum Laude
  - Awards: **Dean's List**: Fall 2021, Spring 2023
  - CSUMB Programming Team Ranked 71st at the ICPC Programming Contest 2022 PacNW-Div2 Region
  - Part of CSUMB Programming Team, CSUMB International Club, CTI Accelerate, Ex-IEEE Member

RELEVANT COURSEWORK

- Python Programming, Software Engineering, Software Design, Data Structures and Algorithms,
- Microprocessor Architecture, Embedded Systems, Digital Electronics, Operating Systems,
- Web Programming, Internet Programming, Computer Networks, Database Management Systems

RESEARCH AND PUBLICATIONS

- Authored research papers accepted, presented, and published in peer-reviewed international research conferences and journals with prestigious organizations including **Scientific Reports** (by Springer Nature) and **IEEE Access** (by IEEE); and also have served as a Peer reviewer for international research conferences.

- **JOURNAL RESEARCH PAPERS**

  1. An Integrated TOPSIS and ARAS Method Multi-Criteria Decision-Making Approach for Optimizing Investment Portfolios Using Goal Programming and Genetic Algorithm Model | *Prajwal Pisal, Kiran Kumar Reddy, Jaydeep Kishore, Ram Reddy Jonnalagadda, Manish Kumar, Gayathri Band, B.P.Joshi*
     - @**Scientific Reports** | Springer Nature | *IF = 3.9, 5th most cited journal in the world*
     - ***Paper Published*** | **DOI Link**

  2. Enhancing Brain Tumor Diagnosis with Ensemble Deep Learning and Optimizer Tuning on MRI Data | *Prajwal Pisal, Anisha Jadhav*
     - @**Scientific Reports** | Springer Nature | *IF = 3.9, 5th most cited journal in the world*
     - ***Paper Revision Submitted, Under Review***

  3. Pathological Speech Synthesis: A Framework and Performance Analysis | *Prajwal Pisal, Anisha Jadhav*
     - @**IEEE Access** | IEEE | *IF = 3.6*
     - ***Paper Accepted, Revision Under Progress by Authors***

- **IEEE CONFERENCE PAPERS**

  1. Harnessing Kernel Tricks for NonLinear Problem Solving: SVM Applications | *Anisha Jadhav, Prajwal Pisal*

- – @**IRASET 2025** | 2025 5th International Conference on Innovative Research in Applied Science, Engineering and Technology | *Fez', Morocco*
- – ***Paper Accepted, Presented in May 2025; and Published in May 2025*** | [**DOI Link**](#)

2. Detection of Nanoparticles with Machine Learning Technique: Evaluation of algorithm performance | *Prajwal Pisal, Jaydeep Kishore, B.P.JOshi, Shweta Goyal*
   - – @**ICSIT 2025** | IEEE 2025 International Conference on Sustainability, Innovation and Technology | *Maharashtra, India*
   - – ***Paper Accepted; Presented in Aug 2025; Under Progress of Publication***

3. Integrating LLMs for Automated Bug Triaging and Root Cause Localization in Software Systems | *Prajwal Pisal, Prateek Jalan, Solomon R Chigurupati, Chandrakanth Puligundla, Srinivas Bhogavalli*
   - – @**AIBThings 2025** | 3rd IEEE International Conference on Artificial Intelligence, Blockchain and Internet of Things | *Central Michigan University (CMU), Michigan, USA*
   - – ***Paper Accepted; Presented in Sept 2025; Under Progress of Publication***

4. CodeProphet: A Predictive LLM Based Framework for Proactive Software Development Planning | *Prajwal Pisal, Neelam Gupta, Rajesh Reddy Ambavaram, Anisha Jadhav, Pravin Kumar Raja Mahendran*
   - – @**AIBThings 2025** | 3rd IEEE International Conference on Artificial Intelligence, Blockchain and Internet of Things | *Central Michigan University (CMU), Michigan, USA*
   - – ***Paper Accepted Presented in Sept 2025; Under Progress of Publication***

5. Prediction of Water quality using Machine Learning and Artificial Intelligence Techniques | *Prajwal Pisal, Niharika Varshney, Anup shekhar Chamoli, Ashutosh Singh*
   - – @**ISCON 2025** | IEEE 2025 International Conference on Information Systems and Computer Networks | *Mathura, Uttar Pradesh, India*
   - – ***Paper Accepted Presented in Sept 2025; Under Progress of Publication***

PROFESSIONAL SERVICE

- **PEER REVIEWER, JUDGE**
  - ○ Reviewed **1** paper @**CE2CT 2025** | IEEE 2025 First International conference on Advances in Computer Science, Electrical, Electronics, and Communication Technologies | *Uttarakhand, India*
  - ○ Reviewed **1** paper @**IBRL @RLC 2025** | Inductive Biases in Reinforcement Learning Workshop 2025 at the 2nd Reinforcement Learning Conference 2025 (RLC 2025) | *Univeristy of Alberta, Canada*
  - ○ Reviewed **2** papers @**AI4Math @ICML 2025** | 2nd AI for Math Workshop 2025 at the 42nd International Conference on Machine Learning (ICML 2025) | *Vancouver, Canada*
  - ○ Reviewed **6** papers @**ACM SIGCSE TS 2026** | Association of Computing Machinery's (ACM) Special Interest Group on Computer Science Education (SIGCSE) Technical Symposium 2026 | *Missouri, USA*
  - ○ Reviewed **1** paper @**ER @NeurIPS 2025** | Efficient Reasoning Workshop 2025 at the Neural Information Processing Systems (NeurIPS 2025)
  - ○ Judged 12+ high school research poster presentations at the **NASA GL4HS 2025** Capstone Symposium.

WORK EXPERIENCE

- **Test Engineer** | **Hyve Solutions, Fremont, CA**   Sept 2023 - Present
  - ○ Proficiently administer and troubleshoot computer systems utilizing **Linux, DMM, Bash** and **Python** to reduce service outages, ensuring uninterrupted operations by **80%,** and reducing routine repairs by **25%.**
  - ○ Defined, implemented, and maintained test processes for 100+ products, including data center servers and switches, ensuring consistent quality and reliability across complex deployments.
  - ○ Developed functional and system-level test scripts and plans, optimizing performance and uptime across large-scale network systems, contributing to a 25% reduction in recurring system issues.

- Designed and implemented automated testing frameworks, improving QA efficiency and reducing test cycle times by 30% while enhancing overall product reliability.
- Analyzed failure reports and performed root-cause troubleshooting, driving process improvements that increased system stability and reduced critical incidents by 20%.
- **Crisis Resolution**: Deployed to Hyve Solutions' KY CVG branch to address 5,000+ server failures; applied advanced debugging, system optimization, and collaborative problem-solving to restore operations with minimal downtime.
- **Demonstrated leadership by training and mentoring 15+ junior employees**, imparting essential skills and knowledge to contribute effectively to the team's objectives and overall success.
- **Tech tools**: Basic DOS, Linux, Bash, Putty, JIRA, MS Teams, MS Excel; **RF** Tools: DMM

INTERNSHIPS

- **Software Engineer** | **OtterSoft**   Jan 2023 - May 2023
  - Played a key role in front-end and back-end development of a wildfire detection system in a 4-person team.
  - Contributed to the implementation of a machine learning model for processing live and historical image data, ensuring seamless integration with a dynamic camera database for real-time updates.
  - Designed and optimized a React-based user interface to deliver immediate fire detection notifications to end-users, enhancing system usability, and achieve 88% validation accuracy.
  - Collaborated closely with team members to , conducting iterative testing and refining system performance.
  - **Tech Tools and Technologies**: Python, HTML, CSS, API, Visual Studio Code, Git, GitHub, ML, MS Teams

- **Software Engineer** | **CodeDay, Seaside, CA**   Jan 2023 - Feb 2023
  - Led a thriving 40,000+ user community within the FreeCodeCamp Classroom's open-source group project, playing a pivotal role in fostering engagement and collaboration among members.
  - Implemented optimization strategies for the teacher profile page using **Next.JS**, incorporating the **localStorage API** for seamless data persistence and enhanced user interaction.
  - Demonstrated a keen understanding of user needs and project objectives, resulting in a significant **10% improvement in user experience** through streamlined navigation and functionality.
  - **Tech Tools and Technologies**: Next.JS, HTML, CSS, API, Visual Studio Code, Git, GitHub, Microsoft Teams

TECHNICAL & SOFT SKILLS

- **Languages:** Java, Python, HTML, CSS, JavaScript, TypeScript, React, SQL, MySQL, .NET, RESTful API
- **Technologies:** ReactJS, NextJS, HTML5, Tailwind-CSS, Selenium, SOAP, CI/CD, AWS
- **Networking:** TCP/IP, FTP, VLAN, Subnetting, Ethernet, OSI Model, Firewall configuration, Switching
- **Networking Tools:** Putty, VPN, Routing; Install, Configure and Maintain Cisco 9336c-fx2, Switches, Routers
- **Hardware:** ATE, Repair & Debug Oracle **x86-based Server & Hardware**, BIOS, BOM validation, Test Engineering
- **Operating Systems:** Linux, Windows, Mac OS
- **Data:** Numpy, MS Power BI, Tableau, Git, GitHub, MySQL Server, PostgreSQL, IntelliJ IDEA, VS Code
- **Management Tools:** JIRA, Microsoft Teams, Microsoft Excel, Microsoft Office, Microsoft 365 Power Apps
- **Soft Skills:** Problem-solving, Critical Thinking, Analytical skills, Can Do Attitude, Collaborative, Teamwork

TECHNICAL CERTIFICATIONS

- Microsoft Certified : Azure Data Scientist Associate | [Credential Link](#)   March 20, 2025
- Certified Secure Computer User v2, EC-Council
- AWS Cloud Practitioner Essentials, Coursera

VOLUNTEERING EXPERIENCE

- **TECHNICAL VOLUNTEERING & COMMUNITY ENGAGEMENT**
  - **Software Developer** | **Partners for Peace, CA**   Sept 2022 - Dec 2022
    - Developed organization's professional **website** aligning with its mission, enhancing webpage content, responsiveness and navigation by **90%**. Also, boosted **social media presence by 85%**.
    - Worked on improvisation of content, interactive and responsiveness of web pages, strong and user-friendly navigation, along with compelling calls-to-action, custom themes & illustrations.
    - Enabled a **95% increase in user engagement** by introducing full Spanish translation to the website, expanding accessibility and providing a more inclusive experience for Spanish-speaking audience.
  - **Software Dev Mentor** | **Girl Scouts of California's Central Coast, CA**   Jan 2022 - April 2022
    - Mentored **10+ Girl Scouts** teaching them Coding, Programming skills and Cyber Security Awareness.
    - Conducted successfully hands-on practical workshops for the students to introduce them to coding languages such as **Python and HTML**, fostering their skills in programming.

- **NON-TECHNICAL VOLUNTEERING & COMMUNITY ENGAGEMENT**
  - **Conference Volunteer Co-Lead** | **IEEE ISTAS 2025 Conference** | *Santa Clara University, California, USA*
    Aug 2025 - Sept 2025
    - Supported day-of-conference operations at the **IEEE International Symposium on Technology and Society (ISTAS 2025)** by coordinating volunteer teams and ensuring timely execution of sessions and logistics.
    - Managed volunteer scheduling, task distribution, and on-site assistance to contribute to a seamless experience for conference participants and speakers.

PROJECTS

- **AI-Powered NGO Claim Verifier** | Python, API, ML | **Software Dev.** | (**Capstone project**)   April 2023
  - **AI-Powered Verification System:** Built a production-grade NGO Claim Verification API that performs automated authenticity checks using multi-source cross-verification (RBI IFSC DB and news sources).
  - **High-Performance NLP Engine:** Developed a custom, zero-dependency NLP engine for entity extraction, disaster classification, location parsing, and financial detection, optimized for Indian NGO campaigns with sub-50ms extraction time.
  - **Parallel Verification Pipeline:** Designed a parallel verification pipeline in FastAPI that validates bank details and correlates disaster-related information to generate a trust score.
  - **Production-Ready Architecture:** Implemented a clean, scalable architecture with modular verification engines, trust scoring logic, structured logging, and serverless-optimized performance achieving under 2 seconds end-to-end.
- **Crisp** | ReactJS, TypeScript, Redux, Tailwind CSS,Git, NodeJS, API | **Software Dev** | Link   Oct 2023
  - Developed an AI-based web application allowing users to get summary of lengthy articles within seconds.
  - Integrated advanced functionalities including Rapid API for AI summarization - OpenAI's GPT Model 4, browser history storage, Copy-to-clipboard functionality, RTK Query for API requests, & UI/UX interface.
- **Forest Fire Detection** | Python, API, ML | **Software Dev.** | (**Capstone project**)   April 2023
  - Developed and implemented ML model to efficiently detect and contain wildfires by processing 4000+ live images and extracting frames from previous fire videos, leveraging dynamic camera database for real-time updates, and highlighted data impact, resulting in 88% validation accuracy.
  - Created a user-friendly front-end interface using React, enabling immediate fire detection notifications
- **Sorting Algorithm Visualizer** | Java, Swing, IntelliJ Idea | **Software Eng.** | GitHub Link   Dec 2022
  - Built app using **Java and Swing**, algorithmic problem-solving implementing Bubble, Selection, Insertion & Quick sort with enhanced UI for boosting algorithm selection improving real-time visualization by **99%**.
  - **Features**: Up to 200% speed acceleration selection, array regeneration, optimized multi-threading