

Ramanan R

Applied ML / Research Engineer

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SUMMARY

Applied AI engineer with 2+ years at Oracle and a 6-month research internship spanning transformer fine-tuning, distributed GPU training, RAG, agentic systems, and 8 peer-reviewed publications across language AI, genomics, computer vision, and algorithms.

SKILLS

Machine learning: Transformers, LLM fine-tuning, RNNs, LSTMs, CNNs, GANs, transfer learning, classification

AI engineering: Python, FastAPI, RAG, agents, MCP, semantic search, SQL, Azure, OCI, Docker, Kubernetes

EXPERIENCE

Oracle | Associate Software Developer | July 2024 - Present

- Built and launched a 0-to-1 grounded-AI support product combining retrieval, agent orchestration, source evidence, persistent conversations, feedback, and analytics.
- Reached 50+ users; a linear adoption model since June 2025 estimates approximately 1,400 queries across 650 conversations.
- Recorded 545 MCP data-tool calls in the latest three-week telemetry window; a four-calls-per-query planning model suggests approximately 5,000-6,000 cumulative calls.
- Unified defect metadata, comments, documentation, and operational knowledge while preserving citations for every answer.
- Owned the software development lifecycle across ingestion pipelines, user management, documentation, production delivery, and proactive weekly feature releases.
- Expanded the product to additional financial-services teams and added product-specific capabilities through MCP tools and reusable skills.
- Supported the Corporate Security and Assurance Process (CSSAP), internal approvals, hosted-AI lifecycle operations, and production analytics.

24/7.ai | Research Intern | January 2024 - June 2024

- Completed a 6-month research internship fine-tuning transformer language models for text classification with parallel GPU training and evaluation.
- Evaluated 3 architecture families, RNNs, LSTMs, and transformers, to compare model-training and classification behavior.

PROJECTS

Novel Antibiotic Discovery - Designed a GAN pipeline for candidate-compound generation, exploring faster and lower-cost early drug-discovery research without claiming experimental validation.

Speech Emotion Detection - Extracted MFCC, LPC, and chroma features and compared Random Forest, Decision Tree, Naive Bayes, and MLP models; the repository reports 99.643% Random Forest accuracy.

Nuclei Detection and Classification - Built a deep-learning microscopy image-analysis project from the SoftSensor.ai work to detect and classify cell nuclei.

EduFlux - Developed accreditation automation used for 1 institutional NBA submission, reducing institutional cost by approximately 90%, and expanded it toward NAAC evidence, scoring, and exports.

Avenue - Contributed to a full-stack booking marketplace and its OCI-to-Azure migration foundation.

MonthEnd - Contributed automated testing, Azure integration, and production stabilization to an employee-benefits platform.

PUBLICATIONS

1. **Comparative Study of Cancer Classification by Analysis of RNA-seq Gene Expression Levels.** ICCCNT 2022.

[DOI](#)

2. **Big Data Application in Cancer Classification by Analysis of RNA-seq Gene Expression.** CONIT 2023. [DOI](#)

3. **Cloud Based Big Data Solution for Cancer Classification: Using Databricks on Large Scale Genomic Data.** InCCCS 2024. [DOI](#)

4. **Integrated AI Based Pipeline for Law Enforcement Application: FIR Assistance.** ICCCN 2024. [DOI](#)

5. **Enhancing Fake Image Detection: A Novel Two-Step Approach Combining GANs and CNNs.** ICMLDE / Procedia Computer Science 2024. [DOI](#)

6. **Advanced Handwriting Recognition System for Handwritten Scripts With AutoCorrect Feature.** ICCCNT 2024. [DOI](#)

7. **Deep Learning Solutions for Real-World Traffic Sign Recognition: A Transfer Learning Approach.** ICCCNT 2024. [DOI](#)

8. **Advancements in String-Searching Algorithms Fastrack-StringSearch: A Novel Approach.** ICCCNT 2024. [DOI](#)

EDUCATION

Amrita School of Engineering | Bachelor of Technology in CSE - Artificial Intelligence | 2020 - 2024 | GPA: 8.99/10 | Google Developer Student Club, GeeksforGeeks Student Chapter, Athletics

St. Joseph's Pre-University College | PCMC: Physics, Chemistry, Mathematics, Computer Science | 2018 - 2020 | 83% | Student Council, NCC

New Horizon Public School | ICSE | 2005 - 2018 | 93%