Aryasomayajula Ram Bharadwaj

London, UK — GitHub — LinkedIn — Blog — ram.bharadwaj.arya@gmail.com — +91-9108832338

PROFESSIONAL SUMMARY

AI safety researcher and engineer with 6+ years developing production AI systems and leading engineering teams. Independent researcher with published work on activation steering, model interpretability, and LLM inference optimization. Currently researching evaluation awareness in large language models.

TECHNICAL SKILLS

- **Programming:** Python, Scala, Java
- **ML/AI:** PyTorch, JAX, Transformers, LangChain, LangGraph
- **Infrastructure:** Docker, Kubernetes, CI/CD, AWS, GCP
- **Systems:** Redis, Kafka, PostgreSQL, MongoDB

EXPERIENCE

AI Safety Researcher - LASR Labs @ Arcadia Impact **Jan 2026 – Present**

London AI Safety Research (LASR) Labs

- Co-designed and implemented the core architecture for a dynamic benchmark measuring evaluation awareness in large language models.
- Designed and ran experiments to elicit and characterize eval-awareness behavior across different evaluation and prompting settings.

Associate Technical Architect - Platform **Nov 2024 – Dec 2025**

Quantiphi Analytics, Bengaluru

- Designed AI agent system for automated issue severity classification and escalation management.
- Architected conversational AI-agent chatbot for a major telecom company's sales team, refactoring legacy systems to LangGraph and reducing codebase size significantly.
- Revamped RAG data ingestion pipeline, improving retrieval accuracy by 20% and reducing time to first token by 3x.

ML Engineer - Innovation & Development Labs **June 2019 – Nov 2024**

Musigma Business Solutions, Bengaluru

- Led a team building a semi-autonomous data analysis platform using AutoGen, with automated prompt optimization and RAG-based evaluation using locally hosted LLMs.
- Built and maintained a high-velocity trading platform: migrated deployment to Kubernetes, rewrote trade-signal generation from R to Scala (Akka), enabling near real-time portfolio visualization.
- Developed ML model operationalization platform with automatic retraining pipelines and canary/blue-green deployment strategies.
- Received 6 Star Performer awards and 2 Impact Awards for technical leadership and delivery excellence.

KEY TECHNICAL PROJECTS

AI-Powered Sales Chatbot **Nov 2024 – Dec 2025**

Team Lead, ML Engineer, Backend Developer

- Designed and implemented an AI agent system for automated replies for a telecom client's sales chatbot.
- Refactored existing codebase from a proprietary framework to LangGraph, significantly reducing overall codebase size.
- Revamped and automated the scheduled RAG data ingestion pipeline, improving retrieval accuracy by 20% and reducing time to first token by 3x.

LLM Agent Platform **Dec 2023 – Nov 2024**

Team Lead, ML Engineer, Backend Developer

- Designed and implemented semi-autonomous data analysis platform using AutoGen framework with custom modifications.

- Developed automated prompt optimization strategies and integrated RAG support with evaluation framework using ensemble of locally hosted LLMs.

High-Velocity Trading Platform **2021 – Dec 2023**

Team Lead, Backend Developer, DevOps

- Led complete architecture modernization, migrating from bare-metal infrastructure to containerized Kubernetes deployment.
- Rewrote legacy R-based signal generation in Scala using Akka actors for improved performance and maintainability.
- Enabled sub-second portfolio visualization and metric calculation for real-time trading decisions.

ML Model Operationalization Platform **2019 – 2021**

Backend Developer, MLOps Engineer

- Built automated retraining pipelines for image classification models with drift detection and performance monitoring.
- Engineered ML model deployment service supporting DAG-based workflows with canary and blue-green strategies.
- Developed Java microservices ecosystem for dynamic Jupyter notebook provisioning and execution.

FELLOWSHIPS & RESIDENCIES

AI Resident - Lossfunk AI Residency **May 2025 – June 2025**

Lossfunk AI Residency

- Selected (5% acceptance rate) for intensive AI residency program with 10 researchers.
- Developed STU-PID, a novel activation steering technique achieving 32% token reduction and improved reasoning accuracy on GSM8K benchmark. Published as Steering Token Usage with PID Control.

RESEARCH & PUBLICATIONS

Scaling Laws for LLM-Based Data Compression **July 2025**

Lead Investigator

- Investigated scaling laws for data-compression capabilities of LLMs on text, image, and speech modalities.

Steering Token Usage with PID Control **June 2025**

Lead Investigator

- Novel technique reducing computational overhead in LLMs through activation steering with 32% token reduction on GSM8K.

Understanding Hidden Computations in Transformer Language Models **August 2024**

Lead Investigator

- Investigated and interpreted how filler tokens work in chain-of-thought reasoning in transformer language models.

AWARDS & RECOGNITIONS

AI Alignment Awards - Winner **July 2023**

AI Safety Research Competition

- Selected among 118 global entries for winning research proposal on "goal misgeneralization" in AI systems.

Honorable Mention - Eliciting Latent Knowledge **March 2022**

Alignment Research Center

- Recognized for innovative approach to open research problem in AI safety.

Bronze Medal - Build-on-Redis Hackathon **February 2021**

Redis Labs

- Developed text-to-code search tool using CodeBERT embeddings and Redis Stack for private repository indexing.

EDUCATION

Bachelor of Technology – Electronics and Communications Engineering **2015–2019**

GMR Institute of Technology, Andhra Pradesh