

# Aryasomayajula Ram Bharadwaj

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## EDUCATION

### B.tech Electronics and Communications

GMR Institute of Technology, Rajam, Andhra Pradesh

2015 - 2019

## WORK EXPERIENCE

### Developer (Apprentice Leader) at Innovation & Development Labs 2019 - Present

Musigma Business Solutions, Bengaluru

2019 - Present

- Designed and implemented for a LLM based workflow orchestrator for data-science tasks
- Researched and benchmarked on S4 model (structured state spaces for sequence modeling) for stock-moment prediction and trade-signal generation for an in-house intraday-trading playform
- Performed evaluation of various hyperparameter optimization algorithms for timeseries models
- Designed and built an automated intra-day trading system, and also acted as a team-lead
- Migrated legacy code for trade-signal generation from R to Scala
- Implemented a multi-objective PSO based optimizer for hyperparameters of various technical-indicators.
- Performed comparative analysis of various hyper-parameter optimization algorithms and implemented a framework for switching between bayesian, PSO and evolutionary optimization algorithms for timeseries models
- Designed framework for deployment strategies (blue-green, canary) for ML models deployed on Kubernetes
- Recognized as "Star performer of the team" 6 times

### ML Alignment Theory Research Trainee May-2023 - July-2023

Stanford Existential Risk Initiative, Remote

May-2023 - July-2023

- MATS is a scientific and educational seminar and an independent research program that underwent AI alignment research training under John Wentworth in the Agent Foundations stream.

## SKILLS

Languages	Scala, Python, Java, R
ML	Pytorch, JAX
DevOps	Kubernetes, Docker-swarm
Misc	Akka, Spring-boot

## PROJECTS

### Interactive Data Science (ML engineer/ backend developer) flask, openai-api

(loosely inspired by promptchainer), A DAG based LLM workflow orchestrator for data-science tasks.

### Tplusone.Org (Team Lead/Backend Developer/DevOps)

Tplusone.Org

An in-house web based application for advanced financial market analysis, executing & visualizing algorithmic trading strategies in real-time.

### MuOps-AI (Backend Developer)

An end to end web-platform for operationalizing machine learning models. Provides a jupyter-notebook like one-stop solution for deploying and monitoring ML models

### Opensource-contributions

Implemented a framework for evaluating code generated by language models in a sandboxed environment, and evaluation of language-model's performance in math-word problems

## AWARDS

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### **AI Alignment Awards** *July 2023*

[www.alignmentawards.com](http://www.alignmentawards.com)

My research-proposal was one of the winning entries for the "goal misgeneralization" track

### **Honorable Mention** *Mar 2022*

Alignment Research Center

ELK (Eliciting Latent Knowledge) is an open theoretical research-problem in AI safety/AI alignment. ARC (Alignment Research Center) hosted a competition for promisable proposals which could potentially solve this problem.

### **Impact Award** *October 2022*

Musigma Business Solutions

Self-engaging with any challenge, and comes up with alternate choices, commanding devops and integration skills

### **Bronze-position** *Feb 2021*

Build-on-Redis Hackathon

Built a natural-language semantic code-search for build-on-redis hackathon, organized by redis-conf