Samarth Rao

✉ samarth.rao@research.iiit.ac.in   ⏺ github.com/rao-samarth

EDUCATION

International Institute of Information Technology, Hyderabad   2024 – Present
B.Tech + M.S. (Dual Degree) in Computer Science

National Academy For Learning, Bengaluru (NAFL)   2020 – 2024
High School Education

INTERESTS

- Artificial Intelligence
- Logical Reasoning / Problem Solving
- Mathematics
- Edge AI

PROJECTS

Agentic Edge Orchestration
A method of distributing inference of an AI model in an edge cluster using reinforcement learning to optimise for low end-to-end latency while accounting for real-time network conditions.

Memetic Knapsack   ⏺ Code   ⬛ Report
A new memetic algorithm for the 0/1 Knapsack problem that integrates Lagrangian Relaxation for variable fixing, Deterministic Crowding with Island Model for diversity, and Simulated Annealing local search. Evaluated against a standard Genetic Algorithm baseline.

Collab-Doc   ⏺ Code
Implementation of a simplified shared document system with support for concurrency and access control, implemented in C.

MyShell   ⏺ Code
A custom shell, implemented in C.

C-Shark   ⏺ Code
A terminal-based packet sniffer, implemented in C.

Minimal ZSH   ⏺ Code
Minimal zsh setup with autosuggestions, syntax highlighting, history tweaks, git branch display, and python virtualenv detection.

ABOUT

Undergraduate researcher pursuing a dual-degree (B.Tech + M.S.) in Computer Science at IIIT Hyderabad, currently in the second year of studies. Open to exploring various areas of computer science with a focus on artificial intelligence, algorithmic problem-solving, and more.