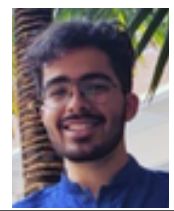


SONI ARYA

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https://github.com/aryasoni28 | https://aryaportfolio-mu.vercel.app/



EDUCATION

PES University

Bachelor of Technology in Computer Science and Engineering

GPA: 8.41/10.00.

Relevant Coursework: Data Structures and Algorithms, Web Development, Operating System, Computer Networks, Big Data, Machine Learning, Data Analytics, Cloud Computing, Generative AI, Database Management System, Compiler Design

Awards: CNR Rao Scholarship , MRD Scholarship (awarded to top 20% students in university), 2 Distinction awards

Bangalore, India
2022-2026

SKILLS

Languages: C, C++, Python, HTML5, CSS3, Javascript, SQL

Databases: MySQL, MongoDB

Big Data & Distributed Systems: Apache Hadoop, Apache Spark, Apache Kafka

Data Science & ML Libraries: NumPy, SciPy, Pandas, Scikit-learn

Computer Vision: OpenCV

Web Development: React.js, Node.js, Express.js (MERN)

Version Control: Git, GitHub

EXPERIENCE

Micro Orbit Consulting Services

Software Development Intern

Gujarat, India
May 2024-August 2024

- Engineered a user-friendly web application that streamlined design project submissions for a Belgium interior design firm, reducing submission errors by 35% and enhancing client satisfaction ratings by 15%.

RESEARCH PAPERS & PUBLICATIONS

A Practical Evaluation of Vector, Graph, and Hybrid RAG Systems

- Implemented and benchmarked three RAG architectures (vector/ChromaDB, graph/Neo4j, hybrid) with quantifiable metrics (BLEU, F1, precision@k), demonstrating hybrid systems achieve 15-20% higher accuracy while analyzing latency-memory tradeoffs in real-world QA applications.

PROJECTS

1. Developing Adaptive Self-Driving Cars Using Liquid Neural Networks and Reinforcement Learning

Ongoing

CARLA, Liquid Neural Networks, DDPG, CNN

- Programming an adaptive self-driving system using Liquid Neural Networks and Reinforcement Learning, enabling real-time decision-making in 4 environments using 2 models.
- Designed a hybrid framework combining CNN-based semantic segmentation (90%+ mIoU), Bayesian uncertainty analysis, and DDPG-based RL, achieving 95%+ success rate in simulated navigation tasks across 3 complex driving scenarios.

2. Retail Expansion and Inventory Intelligence Platform

July 2025

Streamlit, folium, pandas, numpy, plotly, seaborn, scikit-learn

- Built a geospatial ML pipeline to rank top 100 store locations using 5000+ data points on land price, population, income, and competition. Integrated Gemini API for Explainable AI and real-time interpretability.
- Created stock prediction models with 90%+ accuracy using 20+ factors like census data, festivals, discounts, and past sales. Enabled real-time forecasts across 10+ product categories, powering dashboards for 50+ stores.

[Link](#)

3. Code Mentor (AI Mentor Chrome Extension for Coding Practice Platforms)

June 2025

Javascript, Chrome Extensions (Manifest V3), DOM Parsing, HTML, CSS

- Constructed a cross-browser extension (Chrome, Firefox, Edge) for platforms like LeetCode and HackerRank, offering step-wise AI-generated hints across 3 major coding platforms and 1000+ problems without revealing full solutions.
- Engineered 3 custom DOM parsers, a lightweight floating UI (<100 LOC), and integrated 3 core components: parsing, UI, and LLMs (Gemini) for adaptive, site-agnostic mentoring.

[Link](#)

4. Yet Another Distributed Task Queue (YADTQ)

November 2024

Apache kafka, Redis, Python, Tkinter

- Developed YADTQ, a scalable task queue system supporting 10,000+ concurrent tasks with prioritization, retries, failure handling, and integration with 3+ backends (e.g., Redis, Kafka), achieving sub-second latency and high throughput.
- Implemented a multi-queue task distribution algorithm across a heterogeneous server fleet, decreasing average task completion time by 300ms and increasing throughput by 1500 tasks/minute.

[Link](#)

CERTIFICATIONS

- Arithmenia 3.0 runner up (Conducted at PESU RR campus)
- Healthack participation (Conducted at PESU RR campus)
- Hack4Soc participation (Conducted at RVCE)
- Override'22 participation (Conducted at PESU EC campus)
- Runner up in intra-college Badminton tournament
- Badminton state level tournament participation certificate

LEADERSHIP AND VOLUNTEERING EXPERIENCE

SAHAI INDIA

Design Team

Remote

March 2024-November 2024

- Designed visual content for campaigns, social media, and promotional materials
- Collaborated with the team to maintain a consistent and engaging brand identity