

Aru Sharma

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EDUCATION

Panjab University

Bachelor of Engineering in Information Technology

Chandigarh, India

Oct. 2022 – Present

Little Scholars

Mathematics and Computer Science; (Central Board of Secondary Education); 95%

Kashipur, India

May 2019 – Jun 2021

EXPERIENCE

AI Engineer at Google Summer Of Code

Jun 2025 – Sep 2025

Mifos Initiative

Seattle, WA

- Developed a **multi-agent bot** let users know the status of **Jira tickets**, questions related to **Slack discussions**.
- Developed a **full-stack web application** using **FastAPI, NextJs and Firestore** as database and Auth client.

AI Engineering Intern at Summer Of Bitcoin

May 2025– Aug 2025

Bitcoin-dev-project

Manhattan , NY

- Designed and prototyped **AI-assisted coding tools for Bitcoin** using small language models and domain-specific Retrieval-Augmented Generation (RAG).
- Improved **data pipelines** to ingest bitcoin related knowledge from Bitcoin Conference talks, correct and summarize them using LLMs

Open Source Collaborator at EPIC Lab

Oct 2024 – Jan 2025

University of California

Berkeley, CA

- Contributed **User Defined Functions**, LLM based data parsing and **OCR modules** to enhance the usability capability of DocETL.
- Added structured generation support for **Open-Source model** based backend using **Outlines** .

AI Engineer

Sep 2024 – Dec 2024

CNCF WasmEdge

Austin, TX

- Developed a **RAG** based chatbot for code assistance using **opensource LLMs** with **Wasmedge runtime**.
- Created a pipeline to ingest data from **Github repository**, augmented it using QnA pairs, summary and then embed this into a **Qdrant vector database**.

PUBLICATIONS

Robust Speech Emotion Recognition Across Diverse Datasets: A Comparative Study of Deep Learning and Transformer-Based Approaches for VoIP Applications,16th International Conference on Computing Communication and Networking Technologies, 2025 Accepted for publication.

A system to assist visually impaired people (Application Number:- 202531024657)

PROJECTS

Multi-Agent Researcher | Python, Langraph Agents, OpenAI

- Developed an autonomous multi-agent system that takes a user research query and generates a research summary.
- Orchestrated the agents using LangGraph, leveraging handoff mechanisms for task delegation and stateful interactions.

Bitcoin-ASR-Bench | Python, Huggingface transformers, Moshi, Nvidia-Nemo, Ffmpeg

- Benchmarked models from **Open-ASR leaderboard** for transcribing talks from **bitcoin conferences**
- Created scripts to automatically scrape channels for talks and **pre-process** them into wav files as needed by these models.

ACHIEVEMENTS

- Selected for the first edition of **ESOC'25** under the project *Open-Source AI for Drug Discovery*, sponsored by **ecoSPECS** and the **German Center for Open-Source AI**.
- Ranked 15 globally on the **NTIRE Image Dehazing and Denoising challenge** at **CVPR 2024**.