

Aviroop Mitra

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PROFESSIONAL EXPERIENCE

Neurologic-ai | Machine Learning Intern

Nov, 2023 – Jul, 2025

Intelligent Claim Orchestration in Guidewire | Skan AI

May – Jun, 2025

Automated claim creation and assignment in **Guidewire ClaimCenter** with a vision-to-reasoning pipeline that pairs **GPT-4 Vision/Text** (async **Python**, **prompt-engineered** with **token-cost guardrails**) and a **hierarchical scorer** operating on a **30-event window**. Delivered **80%** confidence (+23 pts over benchmark) and **halved inference latency**.

Document Intelligence Platform | Carelon Health

Mar – May, 2025

Streamlit-based interface drives a **PDF-to-image** flow where a **layout-transformer** isolates semantic zones; cropped sections are passed to async **GPT-4 Vision** (backed by **Mistral OCR** and **Python imaging**) and rendered with **Pandas**. The generalized architecture now ingests diverse healthcare documents and keeps end-to-end latency under **3s** without sacrificing accuracy.

PwC India | Advisory Intern

Jun – Jul, 2024

Full-Stack Ticket Platform

Jun – Jul, 2024

Angular + **Spring Boot** + **MongoDB** stack with **JWT**-secured role-based access. Provides a real-time ticket dashboard, template creation/search, appraisal & query threads, and an animated UI—while keeping CRUD latency under **50 ms**. An **API Gateway** and **client-side service discovery** route traffic to horizontally duplicated ticket and auth services for effortless scale-out.

EDUCATION

Indian Institute of Science (IISc) | Master of Technology - MTech in Computer science and engineering

Aug, 2025 – Jul, 2027

Jadavpur University | Bachelor of Engineering - BE (Hons.) in Computer Science and Engineering | GPA: 8.25

Dec, 2021 – Jul, 2025

(76.3%)

Burdwan Municipal High School | Higher Secondary in Science | GPA: O (93.4%)

Jul, 2019 – Mar, 2021

PROJECTS

CVPipeline | [GitHub](#)

Jul, 2024 – Sep, 2025

- Implemented a 6-step modular pipeline using **linkedin-api**, **OpenAI API**, **Google Knowledge Graph API**, **PyGithub** and **Playwright** to fetch LinkedIn data, transform JSON-Resume, enhance content, validate URLs, and generate HTML and PDF resumes.
- Developed **AI-powered** content optimization with **OpenAI** to filter skills, extract projects, and highlight technologies across consistent styling.
- Integrated **async HTTP processing** with **httpx** and **python-dotenv** for secure credential management and **concurrent URL validation** of **hundreds of links**.
- Established **SQLite**-based **API response caching** with **24-hour TTL** to avoid redundant calls and ensure error resilience.

VARC_APP | [GitHub](#)

Apr, 2025

- Developed a **Streamlit** app in **Python** that applies a **20%** business & economics, **50%** science & technology, **20%** art & literary criticism, and **10%** philosophy & sociology distribution to select one article daily from two sources, The Hindu and The Telegraph.
- Implemented **web scraping** modules in app/scrapers for two news sources, utility functions in app/utils, and **caching** in data to ensure a consistent daily article, managed via **pip dependencies** in **requirements.txt**.
- Structured the VARC_APP codebase into four directories—app/components, app/scrapers, app/utils, and data—with main.py under app as the entry point to deliver a clean, intuitive **Streamlit** UI.

distributed-p2p-network | [GitHub](#)

Mar, 2025

- Implemented a distributed text processing system in **Python 3.8+** with **5 Main**, **10 Data**, and **10 Compute Nodes** on ports 8000–10999.
- Developed **chunk-based storage** with **data replication**, **persistence**, **semantic search**, **health monitoring**, and **load balancing** across nodes.
- Structured the code into app/api, core, frontend, models, nodes, and services with scripts for **DB init** and **node orchestration**.
- Automated unit, integration, and **frontend tests** generating **coverage reports** via **pip-managed dependencies** in a **virtual environment**.

SKILLS

Programming Languages: Python, C++, JavaScript, Java, C, SQL

AI & Data Science: Machine Learning, Deep Learning, Natural Language Processing (NLP), Transformers, Scikit-Learn, NumPy

APIs & Libraries: OpenAI API, REST APIs, FastAPI, SQLAlchemy, PIL, pytest

Databases & Data Storage: MySQL, MongoDB

Web Development: Angular, Spring Boot, Node.js

Software Engineering: Object-Oriented Programming (OOP), Debugging Code, Git

AWARDS & ACHIEVEMENTS

GATE CS, 2025 | AIR 65, 99.96 percentile

Feb, 2025

Senior Scholar | Jagadish Bose National Science Talent Search | 98.98 percentile

Jul, 2022

Junior Scholar | Jagadish Bose National Science Talent Search | 98.5 percentile

Mar, 2020