

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

Jadavpur University | Bachelor of Engineering - BE (Hons.) in Computer Science and Engineering | GPA: 8.25 (76.3%)

Dec, 2021 – Jul, 2025

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

Jul, 2019 – Mar, 2021

Burdwan Town School | Secondary | GPA: AA (95.14%)

Jan, 2011 – Mar, 2019

PROJECTS

CVPipeline | [GitHub](#)

Jul, 2024 – Jul, 2025

- Implemented a **6-step** modular pipeline using **LinkedIn API**, **OpenAI API**, **Google Knowledge Graph API**, and **Playwright** that fetches, transforms, enhances, validates, and generates HTML and PDF resumes.
- Developed asynchronous URL validation with **httpx** and **SQLite**-based caching with **24-hour TTL** to manage over **6** API endpoints and avoid redundant calls.
- Incorporated AI-powered content enhancement via **OpenAI** for skill filtering and technical highlighting across **JSON-Resume**, **HTML**, and **PDF** components.
- Engineered styling and error-resilient modules with **python-dotenv** for secure credentials and fallbacks.

VARC_APP | [GitHub](#)

Apr, 2025

- Implemented a **Streamlit** application with **web scraping** modules that fetch articles daily from The Hindu and The Telegraph.
- Developed a probability-based topic selection engine with weights of **20%** business & economics, **50%** science/technology, **20%** art/literary criticism, and **10%** philosophy/sociology.
- Organized code into components for **UI**, **scrapers** for **news scraping**, **utils** for utilities, and **data** for **article caching**.
- Configured **pip**-managed dependencies via **requirements.txt** and streamlined deployment with **streamlit** run app/main.py for fixed daily article selection.

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

Mar, 2025

- Implemented a **Python 3.8+** distributed system with **5 main nodes** allocating tasks, load balancing, and health monitoring across ports **8000-8999**.
- Developed **10 data nodes** using **chunk-based replication** and **persistence** on ports **9000-9999** managing text storage.
- Deployed **10 compute nodes** performing **text chunking**, **embedding generation**, and **semantic similarity search** on ports **10000-10999**.
- Structured modular components with **REST API** endpoints at **/docs** and a **Python**-driven frontend at port 8501 plus scripts for **DB initialization**, **testing**, and **real-time node management**.

SKILLS

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

Machine Learning & Data Science: Machine Learning, Deep Learning, Natural Language Processing (NLP), Convolutional Neural Networks (CNN), Transformers, Large Language Models (LLM)

APIs & Libraries: OpenAI API, REST APIs, SQLAlchemy, Pandas (Software), NumPy, Scikit-Learn

Frameworks & Platforms: FastAPI, Streamlit, Spring Boot, Angular, Node.js

Databases & Data Storage: MySQL, MongoDB

Computer Science Fundamentals: Data Structures, Algorithms, Graph Theory, Object-Oriented Programming (OOP)

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