

# Aviroop Mitra

aviroopmitra5@gmail.com | +91 79809 58951 | India | [LinkedIn](#) | [GitHub](#)

## 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

- Developed a **6-step** pipeline using **linkedin-api**, **OpenAI API**, **Google Knowledge Graph API**, **PyGithub**, and **Playwright** to fetch, transform, AI-enhance, validate, and export HTML/PDF resumes.
- Implemented URL validation with **httpx** and a 3-layer discovery via **Google Knowledge Graph API**, **LinkedIn**, and profile fallback to validate URLs.
- Designed a **3-stage** AI Processor leveraging **OpenAI API** for skill filtering, project extraction, and technical highlighting to optimize content.
- Implemented **SQLite**-based **API caching** with a **24-hour TTL** and **automated cleanup** to minimize redundant API calls.

### VARC\_APP | [GitHub](#)

Apr, 2025

- Developed a **Streamlit** application in **Python** that selects one random article daily based on topic probability distribution: **Business 20%**, **Science 50%**, **Art 20%**, **Philosophy 10%**.
- Implemented **web scraping** modules in scrapers/ directory to fetch and cache articles from multiple sources with utility functions in utils/ for **parsing** and **normalization**.
- Structured a clean and intuitive UI using **Streamlit** components in app/components/ and a main app entrypoint in app/main.py for user interaction.
- Organized repository into app/, data/, and **requirements.txt** enabling reproducible setup and dependency management with pip install -r requirements.txt.

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

Mar, 2025

- Implemented distributed text processing with **Python 3.8+** across **5 Main nodes**, **10 Data nodes**, and **10 Compute nodes** spanning ports 8000–10999.
- Developed **chunk-based storage** on **10 Data nodes** with **data replication** ensuring high persistence.
- Integrated **embedding generation** and **semantic search** on **10 Compute nodes** enabling real-time similarity analysis.
- Orchestrated task distribution, load balancing, and health monitoring via **5 Main nodes** managing API (port 8000) and frontend (port 8501).

## SKILLS

**Programming Languages:** Python (Programming Language), C++, JavaScript, Java, C (Programming Language)

**APIs & Libraries:** OpenAI API, FastAPI, Streamlit, Pandas (Software), NumPy, Scikit-Learn

**Machine Learning & AI:** Large Language Models (LLM), Natural Language Processing (NLP), Recommender Systems, Convolutional Neural Networks (CNN), Transformers

**Databases & Data Storage:** MySQL, MongoDB, SQL

**Testing & QA:** pytest

**Tools & Platforms:** Git, Jupyter

## 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