

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

- Implemented a **6-step** modular pipeline (linkedin_fetcher → transformer → openai_processor → url_validator → html_generator → pdf_generator) using **LinkedIn API**, **OpenAI API**, **Google Knowledge Graph API**, **PyGithub**, **Playwright**, and **Python**.
- Established an **SQLite** cache with **24-hour TTL** for **LinkedIn**, **Google Knowledge Graph**, **GitHub**, and **job search API** responses to avoid redundant calls.
- Enabled async **httpx** processing to validate **100%** of URLs and apply AI-powered content enhancement for skill filtering and project extraction.
- Generated two resume outputs (**HTML** and **PDF**) with **python-dotenv** configured styling and **Playwright**-based conversion.

VARC_APP | [GitHub](#)

Apr, 2025

- Implemented a **Streamlit** UI with clean components module to display a daily random article.
- Developed **web scraping** modules in scrapers/ for The Hindu and The Telegraph to fetch and cache articles in data/.
- Configured topic-based probability distribution spanning Business and Economics (**20%**), Science, Environment, and Technology (**50%**), Art and Literary Criticism (**20%**), and Philosophy and Sociology (**10%**).
- Structured project with app/components, app/scrapers, app/utils, main.py, data/ folder, and **pip-managed dependencies**.

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

Mar, 2025

- Implemented a distributed text processing system in **Python 3.8** that orchestrates **5 main nodes** (8000–8999), **10 data nodes** (9000–9999), and **10 compute nodes** (10000–10999) for coordination and embedding generation.
- Developed **chunk-based storage** and **semantic search** with **real-time load balancing** and **health monitoring** across **25 nodes** using core modules (api, core, models, services, utils).
- Modularized application into **4 Python**-based components—**frontend**, **API endpoints**, **business logic**, and **utility scripts**—to support scalable integration of new nodes.
- Automated environment setup and deployment via **Python** scripts (init_db.py, init_nodes.py, start_frontend.py) and ran **3** test suites (unit, integration, frontend) with **coverage reporting**.

SKILLS

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

AI & Machine Learning: Natural Language Processing (NLP), Transformers, Convolutional Neural Networks (CNN), Large Language Models (LLM), Scikit-Learn, NumPy

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

Databases & Data Storage: MySQL, MongoDB, SQL

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

Fundamentals & Tools: Git, Jupyter, 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