

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** pipeline using **linkedin-api**, **openai**, **Google Knowledge Graph API**, **PyGithub**, and **Playwright** to fetch, transform, AI-enhance, validate, and output HTML/PDF resumes.
- Streamlined async **httpx** URL validation with multi-layer **Google KG** → **LinkedIn** → profile fallback to validate **hundreds** of URLs and remove broken links.
- Generated **two** output formats—responsive **HTML** resumes and print-ready **PDFs**—with configurable styling through centralized **config.py** supporting fonts, colors, and layouts.
- Transformed LinkedIn profile data into **JSON-Resume** format across **six** modular steps with **python-dotenv** credentials and error-resilient fallbacks.

VARC_APP | [GitHub](#)

Apr, 2025

- Implemented a **Streamlit** app in **Python** that selects one daily article from The Hindu and The Telegraph using four topic weights (**20% Business**, 50% Science & Tech, **20% Arts**, **10% Philosophy**).
- Developed modular **Python** scrapers in **app/scrapers** to fetch and cache articles in a data directory for consistent same-day selection.
- Structured the UI via **custom components** in **app/components** and **utilities** in **app/utills** for a clean, intuitive interface.
- Managed dependencies via **requirements.txt** and launched the app with **streamlit** run app/main.py for reproducible environment setup.

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

Mar, 2025

- Implemented a distributed text processing system in **Python 3.8+** leveraging **5** main nodes (ports 8000-8999) for coordination, load balancing, and health monitoring.
- Developed chunk-based storage on **10 data nodes** (ports 9000-9999) with data replication, persistence, and capacity management.
- Engineered **10** compute nodes (ports 10000-10999) for text chunking, embedding generation, semantic search, and real-time node management.
- Integrated a **microservice API** with **Swagger** documentation and a **Streamlit** frontend at localhost:8501 alongside **automated unit, integration, and frontend tests**.

SKILLS

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

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

Web Development & APIs: Spring Boot, Angular, Node.js, FastAPI, REST APIs, OpenAI API

Databases & Data Processing: MySQL, MongoDB, SQLAlchemy, Pandas (Software), NumPy, PIL

Developer Tools & Frameworks: Git, pytest, Jupyter

Computer Science Fundamentals: Algorithms, Data Structures, 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