

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 API**, **PyGithub**, **Google KG API**, and **Playwright** to fetch, transform, AI-enhance, and produce professional **HTML/PDF** resumes.
- Developed **httpx**-based async URL validator with **python-dotenv** for secure credential management across **6 modules**.
- Integrated a **SQLite** cache with **24-hour TTL** to store **LinkedIn**, **GitHub**, and **Knowledge Graph API** responses and avoid redundant calls.

VARC_APP | [GitHub](#)

Apr, 2025

- Implemented a **Streamlit** app in **Python** that selects one daily article from The Hindu or The Telegraph with topic probabilities: **20%** Business & economics, **50%** Science & technology, **20%** Art & literary criticism and **10%** Philosophy & sociology.
- Developed web scrapers using **requests** and **BeautifulSoup** in app/scrapers for **two news sources**, integrated with app/utils for data parsing.
- Structured UI in **app/components**, utilities in **app/utils** and main logic in **app/main.py** for a clean, intuitive interface.
- Configured **data caching** in data/ for consistent daily output and managed dependencies via **requirements.txt** with a **three-step setup**.

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

Mar, 2025

- Implemented a distributed text processing system in **Python 3.8** across **5 main nodes** (8000-8999), **10 data nodes** (9000-9999), and **10 compute nodes** (10000-10999) for coordination, chunk storage, replication, embedding generation, and similarity search.
- Developed chunk-based storage and data persistence using **Python 3.8** across **10 data nodes**, ensuring reliable replication and distribution of text chunks.
- Managed **health monitoring**, **load balancing**, and **real-time node management** via **Python 3.8** scripts across **25 nodes** to optimize performance and system-wide operations.

SKILLS

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

Machine Learning & AI: Convolutional Neural Networks (CNN), Transformers, Recommender Systems, Prompt Engineering, Scikit-Learn

APIs & Libraries: OpenAI API, REST APIs, FastAPI, SQLAlchemy, Pandas (Software), NumPy

Databases & Data Storage: MySQL, MongoDB

Frameworks & Platforms: Spring Boot, Angular, Node.js, Jupyter, Git

Testing & QA: pytest

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