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 Guideware | 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

Indian Institute of Science (IISc) | Master of Technology - MTech in Computer science and engineering *Aug, 2025 – Jul, 2027*

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*

PROJECTS

CVPipeline | GitHub *Jul, 2024 – Sep, 2025*

- Implemented a ***6-step*** modular pipeline comprising ***linkedin_fetcher***, ***data_transformer***, ***openai_processor***, ***url_validator***, ***html_generator***, and ***pdf_generator***.
- Integrated ***LinkedIn***, ***OpenAI***, ***Google Knowledge Graph***, ***GitHub***, ***Playwright***, and ***httpx*** to fetch data, optimize content, validate URLs, and generate HTML/PDF resumes.
- Developed ***async processing*** with ***SQLite caching*** across ***five API sources***, employing a ***24-hour TTL*** and commands to avoid redundant calls and enhance resilience.
- Created centralized configuration in ***scripts/config.py*** for fonts, colors, layout, ***AI prompts***, and ***caching settings*** to ensure consistent professional resume styling.

VARC_APP | GitHub *Apr, 2025*

- Implemented a ***Streamlit*** interface in ***Python*** with ***pip-managed dependencies*** to scrape and cache articles from The Hindu and The Telegraph.
- Configured a topic-based probability selector with ***4 categories*** (***20%***, ***50%***, ***20%***, ***10%***) to deliver ***one daily article*** based on Business & economics, Science & technology, Art & literary criticism, and Philosophy & sociology.
- Structured a modular architecture with app/components for UI, app/scrapers for source-specific crawling, app/utils for shared functions, main.py orchestrating workflows, and a data directory for cached content.

distributed-p2p-network | GitHub *Mar, 2025*

- Implemented a distributed text processing system in ***Python*** with three node types—***5 Main***, ***10 Data***, and ***10 Compute***—coordinating task distribution.
- Developed a chunk-based storage and replication layer in ***Python*** across ***10 Data Nodes*** ensuring data persistence and distribution on ports ***9000–9999***.
- Integrated real-time health monitoring and load balancing in ***Python*** on ***5 Main Nodes*** (ports ***8000–8999***) managing system-wide operations and API coordination.
- Built semantic and similarity search features in ***Python*** on ***10*** Compute Nodes (ports ***10***000–***10***999) for embedding-based analysis.

SKILLS

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

AI & Machine Learning: Machine Learning, Deep Learning, Natural Language Processing (NLP), Transformers, Convolutional Neural Networks (CNN), Recommender Systems

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

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

Databases & Data Storage: MySQL, MongoDB, SQL

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*