Aviroop Mitra

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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

Jadavpur University | Bachelor of Engineering - BE (Hons.) in Computer Science and Engineering | *GPA: 8.25*   *Dec, 2021 – Jul, 2025*
(76.3%)

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** modular pipeline using **LinkedIn API**, **OpenAI API**, **Google KG API**, **PyGithub**, and **Playwright** to auto-generate **HTML** and **PDF** resumes.
- Implemented async URL validation with **httpx** to verify **100%** of links and performed multi-layer discovery via **Google Knowledge Graph**, **LinkedIn**, and fallback.
- Introduced **SQLite** caching with 24-hour TTL for API calls, reducing redundant requests by **90%** and providing cache-stats, clean, and clear commands.
- Engineered **AI** content enhancement in the **AI** Processor module to filter **100+** skills, extract experiences, and apply configurable styling via scripts/config.py.

VARC_APP | GitHub   *Apr, 2025*

- Developed a **Streamlit** app in app/main.py using **Python** and **pip dependencies** to deliver a clean and intuitive daily article selector.
- Implemented **web scraping** modules in app/scrapers/ for The Hindu and The Telegraph to fetch articles from two sources.
- Designed topic-based **probability distribution** (**20%** Business, **50%** Science, **20%** Art, **10%** Philosophy) for randomized daily selection.
- Structured components under app/components/, utilities in app/utils/, and cached data in data/ for **modular architecture**.

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

- Implemented a **Python 3.8+** distributed text processing system with **5 main nodes** (ports 8000-8999) for coordination, load balancing, and health monitoring.
- Designed **10 data nodes** (**ports 9000-9999**) with chunk-based storage, data replication, and persistence across distributed volumes.
- Developed **10 compute nodes** (ports **10000-10999**) using **semantic search** and **embedding generation** for real-time text analysis.
- Integrated **API endpoints** and **Streamlit** frontend with automated scripts for node initialization, database setup, and 3-tier unit, integration, and frontend testing.

SKILLS

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

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

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

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

Databases & Data Storage: MySQL, MongoDB

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*