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

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*   *Dec, 2021 – Jul, 2025* *(76.3%)*

Burdwan Municipal High School | **Higher Secondary in Science** | *GPA: O (93.4%)*   *Jul, 2019 – Mar, 2021*

PROJECTS

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

- Implemented a **6-step** modular pipeline (linkedin_fetcher, linkedin_transformer, openai_processor, url_validator, html_generator, pdf_generator) using **linkedin-api**, **OpenAI API**, **PyGithub**, and **Playwright**.
- Enhanced **AI-driven** skill filtering and extracted **100%** of profile data while validating **200+** URLs via **OpenAI**, **Google KG**, and **LinkedIn APIs**.
- Generated responsive **HTML** resumes and print-ready PDFs with **Playwright** achieving **100%** style consistency and configurable layouts via config.py.
- Cached API responses in **SQLite** with a **24-hour TTL**, reducing redundant calls by **90%** across **LinkedIn**, **Google KG**, **GitHub**, and **job search endpoints**.

VARC_APP | GitHub   *Apr, 2025*

- Developed a **Streamlit** application using **Python** to scrape articles from The Hindu and The Telegraph via custom scraper modules.
- Configured daily random selection using topic probabilities: **50%** sci/tech, **20%** business/econ, **20%** art/lit criticism and **10%** philosophy/sociology.
- Implemented a **component-based architecture** with scrapers/, components/, utils/ and main.py for **modular web scraping**, **UI rendering** and utility functions.
- Managed cached article storage under data/ with dependencies pinned in **requirements.txt** for reproducible setups.

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

- Implemented distributed text processing in **Python** 3.8+ with 5 main, 10 data, and 10 compute nodes orchestrating load balancing and health monitoring.
- Developed chunk-based storage in **Python 3.8+** on **10 data nodes** with replication and persistence leveraging semantic search for similarity analysis.
- Integrated **Python** across **10 compute nodes** for text chunking, embedding generation, and node management supporting similarity searches.
- Structured into **7 modules** (api, core, frontend, models, nodes, services, utils) plus **Python** scripts and tests validated across **4 test suites**.

SKILLS

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

Machine Learning & AI: Machine Learning, Prompt Engineering, Natural Language Processing (NLP), Transformers, Large Language Models (LLM), Deep Learning

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

Databases & Data Storage: MySQL, MongoDB

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

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*