Aviroop Mitra

aviroopmitra5@gmail.com | +91 79809 58951 | India | LinkedIn

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 | *Dec, 2021 – Jul, 2025*
GPA: 8.25

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

Burdwan Town School | Secondary | *GPA: AA*   *Jan, 2011 – Mar, 2019*

PROJECTS

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

- Implemented a *6-step* modular *Python* pipeline orchestrated by pipeline.py to fetch LinkedIn profiles, transform *JSON*, apply *AI*, validate URLs, and generate *HTML/PDF*.
- Integrated *linkedin-api*, *openai*, *Google Knowledge Graph*, *httpx*, and *Playwright* to fetch all profile data, validate *5 URLs* with *10 concurrent requests*.
- Applied *OpenAI* enhancement to filter *47 skills*, extract *2 projects*, and highlight *5 technical skills* via *async processing*.
- Generated responsive *HTML* and A4 print-ready *PDF* with configurable *HelveticaNeue* fonts and color scheme in *62.34 seconds*.

VARC_APP | GitHub   *Apr, 2025*

- Implemented a *Streamlit* application leveraging *Python* and *web scraping* modules to select a random article daily based on topic probabilities (*20% business*, *50% science*, *20% art*, *10% philosophy*).
- Structured the codebase into *app/components* for UI, *app/scrapers* for source-specific scraping, *app/utils* for helper functions, and *main.py* to orchestrate daily selection.
- Integrated *caching* in data/ directory to store and reuse articles to ensure the same article persists throughout the day.
- Configured dependencies via *requirements.txt* to manage *Python* packages and streamline setup with pip install -r *requirements.txt*.

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

- Implemented a distributed text processing system in *Python 3.8* using *pip* and *virtualenv* to orchestrate *5 Main*, *10 Data*, and *10 Compute* nodes on ports *8000-10999*.
- Designed a *three-tier architecture* with *Main nodes* for *coordination*/*load balancing*, *Data nodes* for *replication*/*persistence*, and *Compute nodes* for *embedding* and *search*.
- Enabled *real-time health monitoring* and *load balancing* across *25 nodes*, supporting *chunk-based storage* and *semantic search* capabilities.
- Integrated testing with *unit*, *integration* and *frontend tests* generating coverage reports via *Python* scripts.

SKILLS

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

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

Databases & Data Storage: MySQL, MongoDB, SQL, SQLAlchemy

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

Frameworks & Tools: Angular, Spring Boot, Jupyter, Node.js, API Gateways, 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*