

Ayantanu Laha

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EDUCATION

Ramakrishna Mission Vivekananda Educational and Research Institute

M.Sc in Computer Science

Howrah, India

2023 – 2025

Ramakrishna Mission Residential College, Narendrapur

B.Sc in Computer Science

Kolkata, India

2020 – 2023

- CGPA: 9.61/10.0

PROFESSIONAL EXPERIENCE

Software Engineer Intern

January 2025 – Present

SenSight Technologies Pvt. Ltd., Bangalore, India

- Migrate data from **MySQL** to **BigQuery** using Python and leverage Google Cloud Platform services to manage telematics data.
- Design dashboards in **Looker Studio** and **Amazon QuickSight**, and create views using **LookML** to provide actionable business insights.
- Work on **LLM-based summarization** of user behavior patterns to enhance reporting and analytics capabilities.
- Develop a **geofence-based alert system** to enhance real-time tracking and notifications.

PROJECTS

RAG-Enhanced Cross-Lingual Retrieval: Bridging Bilingual Query Gaps

- Tools & Technologies: Pandas, NumPy, FAISS DB, Hierarchical Navigable Small World (HNSW) Algorithm, Hugging Face, LLaMA 3, Streamlit.
- Developed a cross-lingual Retrieval-Augmented Generation (RAG) system using FAISS as the vector database.
- Designed a cross-lingual retrieval system, improving search relevance for Bengali & English queries.
- Created relational mappings between Bengali and English content for improved cross-lingual retrieval.
- **Link to Project:** GitHub

Ensemble Learning Strategies for Enhancing Predictive Models in Cardiology

- Tools & Technologies: Python, Pandas, Numpy, Scikit-learn, Kaggle, Stacking classifier, Bagging classifier, Boosting classifier.
- Enhanced cardiology diagnostics using ensemble learning (stacking) in Python, combining multiple models to improve prediction accuracy and robustness.
- **Link to Project:** GitHub

PDF Genius: Empowering Document Interaction with AI Chatbot

- Tools & Technologies: Python, Flask, React JS, MySQL, llama-2
- Developed a chatbot capable of processing and extracting information from PDF documents using natural language processing techniques. Integrated a user-friendly UI using React JS to enhance document interaction.
- Implemented search history functionality to allow users to track previous queries and easily revisit important documents.
- Designed quota management system to regulate user access and ensure fair usage of the chatbot's capabilities.
- **Link to Project:** GitHub

SKILLS

- **Programming Languages:** Python, C++
- **Databases & Cloud Technologies:** MySQL, Google BigQuery, Google Cloud Platform (GCP), AQS
- **Libraries & Frameworks:** Pandas, GeoPandas, NLTK, PyTorch, Streamlit, Django, Looker Studio (LookML)
- **Coursework:** Data Structures and Algorithms, Database Management Systems, Computer Networks, Operating Systems, Machine Learning, Deep Learning, Natural Language Processing

ACHIEVEMENTS

- Solved 150+ problems on Leetcode and GeeksForGeeks.
- Design Team Lead in college tech fest **Perceptron**.