

ADITYA YOGESH NAIR

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EXPERIENCE

Research Training

Mar 2024 - Sep 2024

[Amadeus IT Group](#), Villeneuve-Loubet, France

- Built lightweight prompt compression framework for LLMs, cutting API costs by 70% with 5x faster inference
- Utilized transformer attention maps to achieve 92% accuracy on LongBench while maintaining black-box compliance

Research Intern

Jul 2023 - Sep 2023

[CNRS I3S Lab](#), Sophia Antipolis, France

- Optimized DNA storage autoencoders with $L1\infty$ projection, achieving 80% sparsity while preserving PSNR >32dB
- Implemented DNA encoding pipeline using Shannon-Fano + CoolChic MDC, halving payload size

Data Scientist

Nov 2021 - June 2022

[3Analytics](#), USA (Remote)

- Developed a COVID-19 Detection Kit solution utilizing YOLO and OpenCV for real-time bounding box detection and classification
- Designed an automated system for identifying adverse drug reactions leveraging BioBERT

PROJECTS

Book Recommender

[\[demo\]](#) [\[github\]](#)

- Created a book recommendation app using vector embeddings, tailored to user descriptions and reading history.
- Built with Streamlit/Docker, deployed on Fly.io, processed 15k+ book summaries from the Kaggle CMU dataset with HuggingFace embeddings, and visualized feature attribution using integrated gradients.

EuroCities

[\[demo\]](#) [\[github\]](#)

- Designed EuroCities, a data-driven urban accessibility visualization platform that analyzes city infrastructure and transit accessibility across western European cities.
- Led implementation of Python backend using OpenStreetMaps and PySpark to extract geospatial data (20+ cities), with interactive web-based dashboard created with Leaflet, Chart.js, and Tailwind

Llama2.rs

[\[demo\]](#) [\[github\]](#)

- Developed a large language model inference in Rust/WedAssembly, deployed on a static GitHub Page
- Implemented a 15M-parameter transformer with RMSNorm attention heads, SwiGLU and top-p sampling in Rust with WASM bindings while preserving original weights and BPE tokenization

EDUCATION

M.Sc Computer Science (Data Science)

2022-2024

EURECOM — Sophia Antipolis, France

Courses: Advanced Statistics, Deep Learning, Distributed Systems

B.Tech Electronics & Communication

2018-2022

Amrita University — India

TECHNICAL SKILLS

- **Python** | **PyTorch** | **Spark** | **SQL** | **HuggingFace** | **Pandas** | **NumPy** | **scikit-learn** | **Matplotlib/Seaborn** | **Feature Engineering** | **NLP (spaCy, NLTK)** | **Flask/Streamlit** | **Azure** | **Docker** | **Git** | **Tailwind** | **OpenCV** | **Data Visualization** | **Data Analysis**

LANGUAGES

- English (IELTS 8.0/9.0), French (B1 | Improving Conversational Fluency)