

# ARYAN NAIR

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## EDUCATION

### Cornell University

Ithaca, NY

Master of Engineering in Computer Science (GPA: 3.8/4.0)

Expected Dec 2025

- Relevant Coursework: Cloud Computing & ML Hosting, Large Scale ML, NLP, Info Theory & Bayesian ML, AI Strategy

### University of Massachusetts Amherst

Amherst, MA

Bachelor of Science in Computer Science (GPA: 3.63/4.0)

Graduated Dec 2024

## TECHNICAL SKILLS

**Programming Languages:** Python, Java, SQL, C, Javascript, R  
**Frameworks:** TensorFlow, PyTorch, Hadoop, Keras, React Native, Kotlin, Node.js, React.js, Django, Springboot  
**Tools:** AWS, GCP, Langchain, MySQL, Terraform, Tableau, Weights & Biases, NumPy, Docker, Dagster, n8n

## EXPERIENCE

### Simulacrum Inc.

May 2025 – Present

Machine Learning Engineering Intern — Python, PyTorch, Dagster, Docker, FastAPI, Redis

New York, NY

- Designed the **Tempus benchmarking framework** enabling performance comparisons against Simulacrum's **time-series foundation model** — Tempo — in 12 forecasting scenarios
- Deployed Tempus using **Google Cloud Run, Docker**, and **FastAPI** for GPU-accelerated execution
- Reduced runtime by 89% (45→5 minutes) through asynchronous processing with **Redis Queue**
- Implemented 12 baseline models including **ARIMAX, ETS, XGBoost**, and **LSTM** using **Pytorch** with modified hyperparameter tuning to ensure fairness

### NY Metropolitan Transportation Authority, Gao Labs

Jan 2025 – May 2025

Machine Learning Engineering Intern — Python, TensorFlow, Numpy, Pandas, Cesium, PyWavelet

Ithaca, NY

- Developed day-ahead **forecasting models** for solar electricity generation across 13 New York State power plants informing the charging schedules of 265 electric MTA buses
- Applied **wavelet transform** to denoise signals and extracted statistical features contributing to a 12% reduction in MAE

### Wearable Learning

Dec 2023 – Sep 2024

Software Engineering Intern, AI — Kotlin, Java, Firebase, SQL, Langchain

Boston, MA

- Researched AI-based strategies to enhance in-class facilitation of math games for WearableLearning (10000+ MAUs)
- Engineered a student performance dashboard using **Kotlin** and **Firebase** leveraging **LLM-powered analytics** using gameplay metrics like click timing and retries, cutting teacher intervention time by 4 hours/week

### Impactsure Technologies

Jun 2023 – Aug 2023

Data Science Intern — Python, Django, SQL, OpenCV, Tensorflow, PostgreSQL

Remote

- Architected a **Django** microservice for extracting data from financial documents, cutting manual review time by 40%
- **Fine-tuned Meta's DETR neural network** on 500+ bank statements to detect unstructured and incomplete tabular regions, achieving 78% mean Average Precision (mAP)
- Enhanced extracted data using **SQL** joins and aggregations, stored in a high-quality **PostgreSQL** warehouse for reporting
- Designed experimental **Tableau** dashboards used by 5+ stakeholders, replacing manual Excel workflows

## PROJECTS

### EliteCode Mobile App | React Native, Node.js, Supabase, Typescript, Python

Aug 2024 – Present

- Architected an **iOS microlearning app** designed for software interview prep accumulating 600+ active users (**Demo**)
- Integrated **learning analytics** to identify user competency patterns, enabling personalized pathway recommendations that increased avg. daily streak length from 2.3 to 5.5

### LeadBank Mobile App | n8n, Swift, Typescript, SQL, Vogent, Twilio, ChromaDB

May 2025 – Present

- Engineered an affiliate marketing app for M&M Marketing, enabling crowdsourced referrals for credit cards. (**Demo**)
- Automated outbound sales outreach calls using **Vogent AI**, scaling to over 300+ monthly calls and generating 50+ qualified leads per month