

# Yatharth Mogra

yatharthmogra@gmail.com | +1 (646) 271-4771 | linkedin.com/in/yatharthMogra

github.com/yatharthMogra | NY, USA

## Education

### New York University

MS in Computer Science

NY, USA

Sep 2025 – May 2027

**Coursework** :Data Structures and Algorithms, Operating Systems, Network Security, Reinforcement Learning.

### Indian Institute of Technology Mandi

B.Tech. in Data Science and Engineering

Mandi, India

Jul 2019 – Jun 2023

**Coursework**: Programming Paradigms, Big Data & Cloud Computing, Optimization in Data Science, Deep Learning, Computer Vision, Linear Algebra, Topology, Matrix Theory, Numerical analysis, Deep Learning, Computer Vision.

## Experience

### NYU Langone Health

Research Assistant

New York, USA

November 2025 – Present

- Developed an end-to-end **multimodal deep learning pipeline** to predict **time-to-total knee replacement** in knee osteoarthritis patients by integrating baseline 3D knee MRI scans with longitudinal clinical and tabular data, modeling the task as a **time-to-event survival prediction** problem across cohorts totaling 3,000+ patients.
- Implemented and evaluated **DAFT-based conditioning** and **multimodal attention mechanisms** to fuse heterogeneous imaging and clinical representations, achieving strong prognostic performance with C-index values up to 0.85 for time-to-TKR prediction while effectively handling right-censored outcomes.
- Conducted large-scale training and validation on real-world institutional datasets, demonstrating 75–77% accuracy for multi-year surgical risk stratification and contributing to a **peer-reviewed publication** highlighting the clinical feasibility of **personalized surgical timing prediction**.

### Walmart

Software Engineer II

Banagalore, India

July 2023 – July 2025

- Engineered a **distributed inventory-routing microservice** (Java + Kafka + Spring Boot) orchestrating 50 K + daily device-return events with sub-100 ms response latency; implemented idempotent workflows, circuit-breaker resilience, and Grafana observability, fully automating return-channel decisions and recovering \$13 M in quarterly revenue.
- Developed **unified single-scan processing pipeline** integrating asset IDs, wipe-status, and data-removal APIs; cut per-device processing latency by 110 s and standardized operations across 25+ fulfillment centers through parallel I/O.
- Implemented **fault-tolerant Direct Seller Delivery integration layer** using Kafka streams and REST endpoints with retry queues and alerting; sustained 20K+ daily deliveries under zero-downtime deployments and achieved five-nines availability.

### ODE Holdings Inc.

Data Engineer Intern

AZ, USA

Jan 2021 – Aug 2021

- Orchestrated **end-to-end AWS data pipelines**, designing schema and orchestrating ETL workflows with **AWS Glue and Lambda**; enabled automated processing and storage of over **2,000 users' data from 30+ applications**, securely in S3.
- Architected data infrastructure to integrate, transform, and analyze large volumes of **multi-source personal data (Instagram, Facebook, Disney+Hotstar, Hulu)**, delivering actionable insights and supporting **business intelligence** for 2,000+ app users and multiple client-facing projects.

## Skills

**Programming Languages**: Python, C++ , Go (learning), Java, TypeScript.

**Query Languages**: PostgreSQL, PL/pgSQL, PostGIS.

**DevTools**: Git, Bash, Powershell, Docker, Postman, Linux, Anaconda, Google Cloud App Engine(GCP).

**Libraries/Frameworks**: Flask, OpenCV, Tensorflow, PyTorch, OpenAI Gym, Numpy, Pandas.

## Awards & Hackathons

- AWS Financial Hack, NYC - (2nd Place of 220 Teams)**: Created DocuFlow, an auditing intelligence layer using Gemini, Landing AI ADE, and AWS services to convert financial documents into actionable insights and automatically flag invoice–contract mismatches.
- NASA Space Apps 2025 - (Best Cloudflare Implementation Award)** : Built a CF Workers–based RAG system for fast PDF ingestion and AI-driven querying, delivering millisecond retrieval and winning first place at NASA NYC.
- Bravo Award, Walmart**: Recognized for leading and delivering a platform-wide migration of Inventory Service API, completing it in record time with extensive integration testing to ensure zero surprises post-pilot.