

## EXPERIENCE

### Senior Data Engineer and R&D Lead | Miix Analytics | ON, Canada

July 2023 - Present

- Led a team delivering advanced Marketing Mix Models (MMMs) for CPG and retail clients to optimize \$50–\$80M marketing budgets.
- **Engineered scalable automation frameworks** that standardized data pipelines, accelerated model diagnostics, and enabled rapid generation of performance insights—**reducing operational costs by 25%** and improving delivery timelines.
- **Developed** analytical capabilities to automatically evaluate **media saturation curves, diminishing returns, and channel response behaviors**, enabling faster optimization decisions and deeper understanding of media efficiency.
- Partnered with C-suite and senior leadership to translate complex statistical outputs into clear, actionable strategies that improved marketing allocation, forecasting accuracy, and long-term planning.
- Tech stack: Data Modeling, Python, SQL, BigQuery, Redis, AWS (S3, Lambda, Amplify), Google Looker Studio, GCS, Cloud Run

### Software Engineer | Spire Global Inc. | ON, Canada

Nov 2022 - Feb 2023

- Built high-performance **GraphQL APIs for maritime data extraction and satellite imagery processing**, enabling vessel detection with RF signal-based tracking.
- Integrated GIS and OGC Web Map data to enhance algorithm accuracy and scalability.
- Tech stack: Python, AWS, GoLang, GraphQL, GIS, Image Processing

### Backend Software Developer | Haqdarshak | MH, India

Jan 2021 - Oct 2021

- Designed and deployed RESTful microservices serving 10,000+ daily active users.
- Engineered a scheduling backend that streamlined India's COVID vaccination system, **optimizing logistics for nationwide rollout**.
- Improved data workflows, boosting retrieval speeds by 40% while ensuring reliability and data integrity.
- Tech stack: Python, Django, REST APIs, Data Engineering, Docker, Kubernetes, AWS

### Software Engineer | RecruitNet | Hong Kong SAR

Jun 2020 - Dec 2020

- Built scalable web scrapers with Python, Selenium, and BeautifulSoup to extract ATS data, increasing accessibility by 40%.
- Automated cron-job pipelines to integrate multiple data sources seamlessly into a recruitment platform.
- Tech stack: Python, Java, Perl, Selenium, NLP, Data Analysis

### Software Developer Intern | Atliq Technologies | GJ, India

Mar 2019 - July 2019

- Contributed to a cross-platform video streaming and retail app using React and React Native.
- Designed backend integrations with SQL, Redis, and Firebase for scalable performance.
- Tech stack: ReactJS, NodeJS, Firebase, SQL, Redis, PHP

## PROGRAMMING SKILLS

**Data Engineering:** Data Modeling, SQL, PostgreSQL, Redis, AWS (S3, EC2, Lambda), GCS, Airflow, Spark, Kafka

**Programming:** Python, GoLang, Java, C, C++, JavaScript, TypeScript, PHP

**Frameworks/Tools:** Django, FastAPI, REST, GraphQL, Docker, Cloud Run, Git, TensorFlow, Looker Studio, Tableau, Firebase

## PROJECTS

### Retail Optimization for Behavior Analysis & In-Store Navigation

Python, Django, PostgreSQL, React, NLP, TensorFlow

- Led design of an AI-driven system for demand forecasting, inventory optimization, and personalized recommendations.
- Integrated indoor navigation using a modified A\* algorithm to optimize customer shopping paths.

### Healthcare Management System (Freelance)

Flask, React, Python, SQLite, AWS

- Delivered a full-stack healthcare management solution with Flask microservices, JWT authentication, and React-Redux frontend.
- Built secure APIs for patient scheduling, health tracking, and hospital reporting within 20 days.

### Technical Writing ([medium.com/@harshil.99](https://medium.com/@harshil.99))

Python, Tensorflow, NLP, CNN, Auto-Encoders

- Neural Machine Translation (NMT) with Attention Mechanism - **17.1K views, 4.8K reads**
- Image Super-Resolution using CNNs and Auto-Encoders - **15.6K views, 7.5K reads**

## EDUCATION

### Trent University - MSc. in Big Data Analytics (GPA: 4.0/4.0)

May 2021 - Sept 2022

- Researched deep learning architectures (C-BiLSTM, BiLSTM) for predictive analytics. ([bit.ly/cbiLSTM](https://bit.ly/cbiLSTM))

ON, Canada

### Gujarat Technological University - BE. in Computer Engineering (GPA: 3.9/4.0)

Aug 2016 - Sept 2020

- Design Lead at Computer Society of India SB; Mentor, Coding & Hackathon Club.

GJ, India

## AWARDS AND ACHIEVEMENTS

- Awarded **Employee of the Year (2023)** at Miix Analytics for leading high-impact data engineering and R&D projects.
- Named **2024 Global 30-Under-30** by Significant Insights for excellence in research, data, and insights leadership.