

AYUSH MANIAR

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EDUCATION AND SCHOLASTIC ACHIEVEMENTS

University of California, San Diego

Master of Science in Computer Science

Sep 2024 - Present

CGPA: 4.0/4.0

Indian Institute of Technology, Madras

Bachelor of Technology in Electrical Engineering

Jun 2017 – Jun 2021

Chennai, India

PROFESSIONAL EXPERIENCE

Data Scientist – III

Walmart Global Tech India | SAMS Club

Jul 2021 – Aug 2024

Bangalore, India

- Implement time series algorithms as the **Primary Inventor of a patented innovation to predict accurate Transit times** for carriers used by SAMS Club, including FedEx and Pilot. This breakthrough reduced order to promise (OTP) time by 1.2 days, increased on-time deliveries to 71%, and boosted **order conversion by \$56M**.
- Developed a robust **Delivery Delay prediction** model for SAMS Club online orders with Recall: 75%, Precision: 98% thereby improving **post-delivery NPS** (Net Promoter Score) **by 20 points and reducing WISMO (Where is my order) calls by 46%**, owing to the massive success of the project, it was **presented to the CTO of SAMS Club** Vinod Bidarkoppa during FY22-23 AI & Machine Learning Innovation showcase
- Authored a **white paper on order sourcing optimization** which reduces split deliveries by 40% and transportation cost by **\$21M** using Mixed Integer Linear Programming with **COIN-OR Branch and Cut (CBC) and CPLEX**
- Built an algorithm on **Safety Stock Optimization** which ensures availability of online inventory by **predicting the Walk-in sales at an item-club level** thereby boosting online sales by **\$40M**

Founder

Eye In The Sky, A Deep Learning & Computer Vision Startup | Disaster Management

Feb 2018 – Apr 2020

Dr. Kaushik Mitra | IIT Madras

- Led a team of 5 AI engineers** and **raised INR 19.5 Lakhs** in equity-less funding
- Built an **Activity Recognition model** by integrating a LSTM classification model with **Pose Estimation** to detect SOS signal
- Developed a **“Consciousness Detection”** algorithm using **Lucas-Kanade Optical Flow** and YOLO to detect people who are immobile while taking in account the relative velocity components of the drone with respect to the ground
- Develop a **real-time algorithm for generating 2D maps** using top-down video feed from drones at high altitude of 300m
- Led successful field tests in collaboration with **National Disaster Response Forces (NDRF)**, demonstrating system capabilities like drone deployment, unconscious person detection, and transmission of GPS coordinates of survivors for rapid rescue

RESEARCH PROJECT

Reasoning for Multi AI Agent Coordination (Minecraft)

Research; Guided by Prof. Prithviraj Ammanabrolu and Prof. Lianhui Qin

Jul 2021 – Present MS

San Diego, USA

- Developed a suite of **multi-agent** peer-to-peer collaboration tasks testing different aspects of **collaborative reasoning** such as sharing resources, skill sets, expertise and information
- Leveraged the function calling abilities of Large Language Models (LLMs) to ground agents in the world of Minecraft by creating custom tools
- Conducted comparative evaluations of contemporary language models, highlighting success rates across tasks and providing insights into multi-agent collaboration efficiencies

SKILLS

- Python, Pytorch, Huggingface, LangChain, smolAgents, SQL, Databricks, JavaScript, TensorFlow, Git, Linux, PySpark, StreamLit

ACHIEVEMENTS

- Received **Excellence Award** for ideating and deploying 3 innovations creating an impact of **\$120M at Walmart Global Technology**
- Raised **INR 10 Lakhs** among top 20 innovative startups in India as a part of **Indian Innovation Growth Program**
- Awarded the **International Microsoft ‘AI For Earth’ Grant** for “Eye In The Sky” startup, granted to only 202 projects at the time. The award facilitates projects which utilize **AI to solve global environmental problems** with **US 5000\$** cloud compute
- Invited to **Microsoft Headquarters, Redmond, USA** to present “Eye In The Sky” startup at **AI For Earth Summit (2019)**