

# AYUSH MANIAR

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## EDUCATION

### University of California, San Diego

Master of Science in Computer Science

Key Courses: AI/LLM Agents & RL, Large Language Model Reasoning, Recommender Systems

Sep 2024 – Present

San Diego, USA

CGPA : 3.96/4.00

### Indian Institute of Technology, Madras

Bachelor of Technology in Electrical Engineering

Jun 2017 – Jun 2021

Chennai, India

## PROFESSIONAL EXPERIENCE

### Research Scientist Intern - Generative AI

Riot Games

Jun 2025 – Sep 2025

Los Angeles, USA

- Developed an **AI creative story writing engine** using a **dual agent planner-follower architecture** that generates interconnected quests grounded in the **League of Legends universe** featuring persistent NPC memory, **evolving NPC-NPC and NPC-Player relationships**, and **organic world exploration** that naturally guides players between locations
- Story-to-Code Pipeline Research** - Developed methodology for translating textual narrative stories into interactive game experiences using **Code Generation agents** achieving reliable conversion of complex story structures into functional quest systems with branching dialogue, conditional logic, and dynamic world events, sophisticated event trigger monitoring (clue discovery, dialogue progression, location-based, inventory tracking) to create living, breathing, responsive game worlds.
- Built a **Multimodal AI Comic Book Generator** leveraging Retrieval-Augmented Generation (RAG) and the **gpt-image-1 "edit" API** to transform **Valorant** combat reports into personalized, comic book narratives grounded in the game's art style.

### Data Scientist – III

Walmart Global Tech India, SAMS Club

Jul 2021 – Aug 2024

Bangalore, India

- Implemented time series algorithms as **Primary Inventor of a patent under provisional filing**, involving **prediction of 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 Global CTO of SAMS Club Vinod Bidarkoppa** during FY22-23 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 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 an LSTM classifier 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 into account the relative velocity components of the drone with respect to the ground
- Developed 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 Multiple LLM Agent Coordination (**NeurIPS 2025**)

MS Research; Guided by Prof. Lianhui Qin

Sep 2024- Present

San Diego, USA

- Developed a suite of **multi-agent peer-peer collaboration** tasks testing different aspects of **collaborative reasoning** such as sharing resources, skill sets, expertise, and information
- Leveraged the efficient **function calling** abilities of LLMs to ground the 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

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Python, AI Agents, Model Context Protocol (MCP), LangChain, SQL, Databricks, JavaScript, Pytorch, TensorFlow, Git, Linux, PySpark, StreamLit

## ACHIEVEMENTS

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- Received **Excellence Award** for ideating and deploying 3 innovations creating an impact of **\$120M at Walmart**
- Raised **INR 1 Million** among top 20 innovative startups in India as a part of **Indian Innovation Growth Program**
- **National Winners of Microsoft Codefund++** 2019 challenge (among 2000+ teams) with a prize money of **INR 5 Lakhs**
- 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)