

Atharva Atre

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PROFESSIONAL EXPERIENCE

Zipline | Machine Learning Software Development Intern | Bay Area, California

May 2023 - August 2023

- Developed ML algorithms and pipelines for weather forecasting and threat detection (lightning and thunderstorms) for Zipline, the world's largest autonomous drone delivery operation. My contributions to flight route planning decreased flight risk by 5%
- Engineered end-to-end ML pipeline: Hadoop data processing, Kafka queuing, Kubernetes & Docker deployment
- Designed and implemented a novel metric to calculate profit/loss for each flight, collaborating closely with various SDE teams to integrate this metric into Zipline's flight analytics platform, which helped in better financial analysis and operational optimizations

Sravathi AI | Lead Data Scientist | Bengaluru, India

August 2020 - June 2022

- Led a team of scientists in applying AI/ML to accelerate R&D of life-saving drugs in the healthcare domain
- Directed development of PaaS products using Graph Neural Network, Monte Carlo Tree Search, NLP (LLMs - BERT and RoBERTa), XGBoost, RF & Deep Learning models, for pharmaceutical companies, generating an estimated yearly revenue of \$10 M
- Collaborated closely with specialists from multiple disciplines ranging from quantum physicists, MIT and Harvard Professors, biochemistry scientists to business development managers to provide PaaS services and business intelligence worth \$25M

DroneStark Technologies | Data Scientist | Mumbai, India

July 2019 - July 2020

- Prototyped 8 software modules utilized by drones for emergency response in extreme conditions using Computer Vision by deploying OpenCV, object detection & SLAM architecture managing data across 1000+ drone systems
- Increased revenue by 200% YoY & profit margin by 60% by partnering with new clients & optimizing tech stack

Redwing Labs | Software Developer Intern | Bengaluru, India

October 2018 - May 2019

Spearheaded the design and implementation of the "No Permission No Takeoff" software for the drone that secured a \$1 million funding

ADDITIONAL PROFESSIONAL EXPERIENCE

The Green AI Foundation | Technical Advisor | Orlando, Florida

Jan 2023 - Current

Advising the non-profit on AI projects: environmental sustainability, water conservation & marine biology in accordance with the UN

Laboratory of Data Science | Program Manager | West Lafayette, Indiana

Jan 2023 - May 2023

Managed 15 Junior Data Scientists researching on Large Language Models catered to enhance big data expertise and amplify data science opportunities for student and local community engagement in Northeastern Indiana, with the goal of promoting data science for good

Purdue Data Mine | Graduate Data Science Researcher | West Lafayette, Indiana

August 2022 - May 2023

Partnered with Central Mutual Insurance Company to provide meaningful insights on their 300K policy holders with assets worth \$2B
Leveraged ML and Graph Networks to analyze social media profile of 10k clients - social media graph network analysis

PUBLICATIONS

Drone Delivery-Application Path Optimization : Drone Delivery end-to-end solution

2 more publications : Multi Agent Reinforcement Learning with MIT and Entropy in ML datasets with Dr. Reza in manuscript preparation

EDUCATION

Purdue University | Master of Science in Computer Science | GPA 4/4

August 2022 - May 2024

University of Mumbai | Bachelor of Engineering in Computer Science | GPA 3.6/4

June 2016 - June 2019

TECHNICAL SKILLS

Programming Languages : Python, C++, C, R, bash ; **ML Technologies** : Tensorflow, PyTorch, Docker, Kubernetes, Kafka

Cloud : AWS(EC2, Sagemaker, S3, Lambda), Databricks ; **Databases** : MySQL, MongoDB, Hadoop, Spark, Neo4j, MapReduce, Hive, Impala

Tools : Agile Methods, Git, JIRA, Project Management, VScode

PROJECTS

Voice Translation using Deep Learning: Capstone Project: Over-the-air voice translation supporting 30+ languages

Modeled Whisper AI trained on 680+ hours of multilingual speech for automatic speech recognition & translation using an encoder-decoder Transformer, with samples chunked into 30-second segments

AI - Drone for automated delivery: Capstone Project: Optimized drone delivery for business by reducing delivery time

Implemented A* algorithm for path optimization and was shortlisted by Entrepreneur-cell for best startup idea with funding of \$100K

HONORS AND AWARDS

Champion Award - For outstanding performance at Sravathi AI - award for completing all project deliverables

Finalist-India Innovation Challenge 2019-Best startup idea in collaboration with Texas Instruments & IIM-B