

YASH BITLA

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Objective: Software Engineer full-time roles starting July 2024

EDUCATION

University of Southern California

Master of Science in Computer Science. GPA: 3.61 / 4.0

Los Angeles, USA

January 2022 - December 2023

Courses: Analysis of Algorithm, Advanced Web Technologies, Advanced Database Systems, Information Retrieval and Web Engines, Artificial Intelligence, Machine Learning for Data Science, Natural Language Processing.

University of Mumbai

Bachelor in Engineering (B.E.), Department of Computer Science. GPA: 3.9 / 4.0

Mumbai, India

August 2017 - January 2021

EXPERIENCE

Dragonfruit AI

Software Engineer Intern

Menlo Park (remote), USA

March 2024 - Present

- Leading integration of **ML training workflows** with weights and biases API, **improving efficiency by 5%** to manage large-scale AI model training more effectively.
- Dockerized training environments and automated model training launches, **reducing deployment time by 10%**.
- Enhancing the **notification alert system** to periodically collect and analyze false positive alerts using Celery and RabbitMQ.
- Implementing **RESTful APIs** for dynamic alert processing with **client-specific configurations** managed in PostgreSQL.

Galileo Financial Technologies (SoFi)

Software Engineering Intern

San Francisco, USA

May 2023 - August 2023

- Designed and developed a **robust monitoring system** using Kubernetes and RabbitMQ to capture metrics and results for the **fraud detection service**.
- Optimized system to run **asynchronously** with fraud detection service, ensuring **no impact on response times**.
- Built and deployed **real-time analytics dashboard** using Splunk and DynamoDB, resulting in a **10% increase in client attraction and retention**.

Integrated Media Systems Center (IMSC) Lab, USC

Research Assistant

Los Angeles, USA

May 2022 - May 2023

- Explored and addressed **real-world street monitoring complexities**, focusing on homeless encampments.
- Adapted **YOLOv5 with DeepSort** object tracker to detect and count homeless encampments in different noisy environments.
- Achieved a **precision of 0.75 and a counting error ratio of 0.13** in a real-world noisy environment dataset.

Development Monitors LLC

Software Engineer

Arlington (remote), USA

Jan 2021 - December 2021

- Engineered an **end-to-end inference pipeline**, developing robust RESTful APIs to trigger machine learning models optimized for efficient detection in user-selected map regions.
- Analysed API responses to dynamically generate shapefiles, transforming pixel coordinates to latitude-longitude data for precise mapping, **reducing mapping error by 12%**.
- Optimized web-based rendering of detection output, leading to **2x increase in overall time efficiency**.

TECHNICAL SKILLS

Programming Languages: Python, Java, C++, HTML, CSS, JavaScript, TypeScript

Frameworks and Tools: Kubernetes, RabbitMQ, Node.js, Angular, Docker, REST, Django, Next.js, Splunk, Terraform

Database and Cloud: MySQL, PostgreSQL, AWS, DynamoDB, Firebase, GCP

SELECTED PUBLICATIONS

- Yash Bitla, Abdullah Alfarrarjeh, Seon Ho Kim, Utkarsh Baranwal; *Presented at IEEE ICIP 2023* ([Link](#))
Object Detection and Counting Challenges in Real Street Monitoring: Case Study of Homeless Encampments

PROJECTS

Event Finder Web Application ([Code](#))

January 2023 - May 2023

- Developed a responsive web page using **Angular and Node.js**, integrated with real-time APIs for enhanced user engagement.
- Improved **event search functionality** by integrating Google Maps and IPinfo.io geocoding APIs.

Drone Route Planning – Indian Space Research Organization ([Code](#))

July 2020 - August 2020

- Designed an algorithm to plan the most **efficient drone route and schedule**, considering constraints like geography, drone battery, fuel stations, and obstacles.
- Created user interface using **ReactJS to simulate the drone route**, improving usability and user experience.

LEADERSHIP ROLES AND NOTABLE ACHIEVEMENTS

- 3rd rank globally in the [Smart India Hackathon \(SIH\) 2020](#) for the Drone Route Planning project, sponsored by ISRO.