YASH VENKATESH BITLA

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EDUCATION

University of Southern California, Los Angeles, CA **Jan 2022-Dec 2023**
Master of Science in Computer Science
Courses: Foundation of Artificial Intelligence, Analysis of Algorithm, Machine Learning for Data Science, Database Systems

University of Mumbai, Mumbai, India **Aug 2017-May 2021**
Bachelor of Engineering in Computer Science CGPA: 9.11/10
Courses: Data Structures, Machine Learning, Object Oriented Programming, Database Management

TECHNICAL SKILLS

Programming Languages - Python, C#, C++, Java, HTML/CSS, JavaScript, MATLAB
Frameworks & Tools - PyTorch, TensorFlow, Keras, Pandas, Android Studio, Docker, Flask, CUDA, PowerBI
Databases - Mongo, MySQL, Hadoop, AWS, Firebase

WORK EXPERIENCE

Integrated Media Systems Center Lab, USC, *Graduate Research Assistant* **May 2022-Present**

- Working with a team to develop deep learning models and OpenCV implementation to count homeless encampments for urban planning by local government bodies in California under Dr. Seon Kim.
- Modifying CSRT, KCF, and MIL tracker for tracking multiple objects with a non-static camera.

Development Monitors LLC, Arlington, USA, *Machine Learning Intern* **Jun 2021-Dec 2021**

- Trained a Feature Pyramid Network on geospatial satellite imagery to detect building roof types (mud, metal, clay) and improved accuracy by 146%.
- Implemented Machine Learned Regularization and Polygonization of Building Segmentation Masks to produce visually pleasing building outlines.
- Created shapefiles with coordinates of all detections and rendered them on web-based community mapping software.

Young Women's Christian Association, India, *Software Engineer Intern* **Jan 2020-Oct 2020**

- Identified problems in YWCA's current workflow and led an android development team that built a mobile application (YWCA of Bombay) to improve their operations.
- Integrated dynamic lists with recycler view to display different events and created an admin control page.
- Boosted click rates by 133% and increased event registration by 200%.

PROJECTS

Hybrid Text and Image Compression Parallel Algorithm **Sep 2020-Mar 2021**

- Developed hybrid algorithms and deep learning models to increase text compression ratio by 30% and image compression ratio to 300:1 compared to existing standard algorithms.
- Implemented a parallel processing algorithm to achieve a speed up of 25.094 for LZSS and 26.08 for Huffman compression.
- Accepted for oral presentation at International Symposium on Grids and Clouds 2021.

Drone Route Planning – ISRO *(Smart India Hackathon)* **Jul 2020-Aug 2020**

- Designed an algorithm to plan most efficient drone route and schedule, considering multiple constraints like geography, drone battery, fuel stations, and obstacles.
- Performed simulation and animation to visualize route using HTML/CSS, JavaScript, and Google Map API. (GITHUB)

LEADERSHIP & AWARDS

- **Founding Team Member of StraysCue**, a Non-Profit Organization for animal welfare that secured a grant of $2,00,000 technical credits from Xartup fellowship.
- **Smart India Hackathon – MHRD, India, 2021** – One of the top 3 National-level finalists for topic "Drone Route Planning" given by ISRO.
- **Game of Codes – CSI DBIT, 2020** – Secured second place among more than 100 students from universities across India.
- **Head of the Creative Club and Décor team** in Don Bosco Institute of Technology (2019-20).