Raghav Maddukuri

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# Education

**University of California San Diego** San Diego, CA

*Bachelor of Science in Mathematics-Computer Science Expected Graduation: Fall 2022*

# Experience

**Intern at Workday** Dublin, CA

[*Workday*](https://www.workday.com/) *June 2022 - August 2022*

* *Working on Application Development using proprietary technologies*
* *Used an Anomaly detection Model to give insights on customer purchases*
* *Made use of Object Orientated Design Techniques*

**UCSD Research Internship** La Jolla, CA

[*UCSD E4E*](http://e4e.ucsd.edu/) *March 2021 - August 2021*

* *Created the software for an autonomous underwater vehicle that utilizes the next best view algorithm for the FishSense Team as part of the UCSD E4E group.*
* *Used computer vision and pre-processing techniques to create a depth map of ﬁsh populations to monitor and measure the ocean eco-health*
* *Published a paper to IEEE OES as part of the OCEANS conference in September 2021*
  + *“*[FishSense: Underwater RGBD Imaging for Fish Measurement](https://www.semanticscholar.org/paper/FishSense%3A-Underwater-RGBD-Imaging-for-Fish-Tueller-Maddukuri/7041ee7af7dd928b3a8318bebb9ddc80636b88ea)*”*

**Artificial Intelligence Engineer** La Jolla, CA

[*Triton Robotics*](https://tritonrobotics.org/) *Dec. 2020 - Present*

* *Specialized in data augmentation via Keras, and Tensorﬂow to create artiﬁcial data to address the lack of data due to Covid-19*
* *Utilized Yolo v4 neural network to create an object detection program to track, and shoot at enemy robots*

**Machine Learning Engineer** La Jolla, CA

[*Triton RoboSub*](https://robosub.ucsd.edu/) *Oct. 2020 - Present*

* *Utilized Machine Learning models in combination with gyroscope and accelerometer data to determine checkpoints' position and distance*
* *Worked across subteams to deliver an eﬀective Robosub competition robot*
* *Used Ros Noetic to pipeline data from depth cameras to usable data*
* *Worked with Ubuntu to leverage Linux/Unix functionality*

# Projects

[**Solar System**](https://github.com/rmadduku/Solar_System) **|** *OpenGL, C++* Jan. 2022 - Mar. 2022

* *Created a Semi Realistic Solar System in OpenGL*
* *Used C++ data structures, Bezier Curves, matrix algebra, and more to construct shapes.*

[**Wordle Solver**](https://github.com/rmadduku/wordle) **|** *Python, SageMath, Julia* Oct. 2021 - Dec. 2021

* *Utilized SageMath and Julia to create a statistical approach to solve Wordle*
* *Used data processing and mathematical software to compute probabilities and output the best results.*

[**AI Tracks**](https://www.challenge.gov/challenge/AI-tracks-at-sea/) **|** *OpenCV, Python* Oct. 2020 - Dec. 2020

* *Utilized OpenCV, background subtraction, and other pre-processing techniques*
* *Trained neural- networks to track a boat’s latitude and longitude on the surface of the water despite occlusion*

**Mask Recognizer |** *Computer Vision, Machine Learning* Dec. 2020 - Present

* *Trained and used a convolutional neural network to detect if a person was wearing a mask correctly*
* *Applied the program to a live camera to provide real-time detection of a person wearing a mask.*