

# Sumedh Godbole

Tempe AZ

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## Objective

Masters Student at Arizona State University with experience in Machine Learning, Robotics and Computer Vision; actively looking for job opportunities starting May 2021 to be able to refine my skillset, with a commitment to making significant contributions to the company.

## Education

### Arizona State University

MASTER OF SCIENCE IN COMPUTER SCIENCE (THESIS OPTION) {GPA : 3.78/4}

- Specialization : Artificial Intelligence

Tempe, AZ, U.S.A

August 2019 - May 2021

#### RELEVANT GRADUATE COURSES

- Applied Cryptography (C++), Fundamentals of Algorithms, Perception In Robotics, Topics in NLP, Data Visualization (JavaScript)

### Sant Gadge Baba Amravati University

B.E. IN COMPUTER SCIENCE AND ENGINEERING {GPA : 9.11/10}

- Ranked 7<sup>th</sup> on the university merit list for Computer Science (2017)

Amravati, Maharashtra, India

Mar. 2013 - Sep. 2017

## Work Experience

### ASU Active Perception Group

GRADUATE SERVICES ASSISTANT

- Worked as a Research Assistant with the Active Perception Group at ASU for Summer 2020

ASU

May 2020 - Aug 2020

### School of Computing, Informatics, and Decision Systems Engineering

GRADUATE TEACHING ASSISTANT

- Course : CSE 110 - Principles of Programming (Java)
- Responsible for conducting Lab Sessions, Office Hours and Grading Exams

ASU

Aug 2019 - Dec 2019

### Sahir Projects

MACHINE LEARNING ENGINEER

- Engineered a Machine Learning proof-of-concept exercise resulting in the eventual adoption of a Machine Learning framework by the company
- Synthesized training data for the exercise by making use of random normal distributions and labeled it using a complex rule based system
- Designed a model to predict the probability of a company winning a bid using a Random Forest classifier for its low bias, resulting in a 9% increase in the number of bids won compared to the last financial quarter

Pune, India

Jul 2018 - Apr 2019

## Projects

### Online Prediction for Vision-based Active Pursuit using Domain Agnostic Offline Motion Model

IEEE ICRA'21

MASTERS THESIS

Nov 2020

- Hypothesis : The ability to predict the future location of an evader in vision-based pursuit can be utilized to capture it faster
- Proposed the use of an encoder-decoder LSTM as a predictive model that can produce more accurate estimations of an evader's future location when compared to conventional filtering-based methods such as Kalman Filtering
- Evaluated the effectiveness of this approach by setting up pursuer and evader vehicles in a MORSE environment which showed a 26% faster capture of the evader using our method
- Empirically proved that our method is adaptable across domains without the explicit need to retrain the prediction module by evaluating it in the CARLA environment (low mean prediction RMSE over 100 runs)
- Our contributions establish a foundation for the development of robust tracking and pursuit methodologies to be used by Autonomous Vehicles

### The Scope of Human Computer Interaction

UNDERGRADUATE DEGREE PROJECT

Jul. 2017

- Designed an Android application to help obtain information about any location towards which the device camera is pointed, resulting in an elevated usability index (HCI) for conventionally used Navigation Apps
- Provided the user with a feature to pan the camera during which, an AR-based overlay containing information about the target location is displayed on the screen of the host device
- Responsible for the processing of the sensor data and the rendering the overlay by leveraging the Android Studio IDE
- Led a 4-member team to first place in National Paper Presentation Threshold'17

## Technical Proficiency

#### LANGUAGES

- Python, C++, Java, HTML5 / CSS3, JavaScript, SQL, C

#### SIMULATORS / FRAMEWORKS / IDES / LIBRARIES

- CARLA, MORSE, ROS, Gazebo, OpenCV Tensorflow, Torch, Theano, Keras, Seaborn, Matplotlib, Scikit-Learn, Google Firebase, Android Studio, AWS, GCP, Jupyter Notebook, Anaconda

#### CERTIFICATES

- Web Development, AWS Fundamentals Specialization, Computer Vision : OpenCV, SSD and GANs, Machine Learning, Deep Learning, Android Application Development

## Honors & Awards

- |      |                                                                                                        |              |
|------|--------------------------------------------------------------------------------------------------------|--------------|
| 2020 | <b>Engineering Graduate Fellowship (Fall 2020)</b> , Ira A. Fulton Schools of Engineering              | ASU          |
| 2019 | <b>Engineering Graduate Fellowship (Fall 2019, Spring 2020)</b> , Ira A. Fulton Schools of Engineering | ASU          |
| 2017 | <b>1st Place</b> , THRESHOLD National Level Paper Presentation, Babasaheb Naik College of Engineering  | Pusad, India |