SUMEDH GODBOLE

480-760-3419 | sumedhgodbole@asu.edu | https://www.linkedin.com/in/sumedhgodbole/ | https://github.com/sumedhgodbole/

EDUCATION

ARIZONA STATE UNIVERSITY *Tempe, AZ*
Master of Science in Computer Science (AI) {GPA: 3.83 / 4.0} *August 2019 - May 2021*
- Coursework: Applied Cryptography (C++), Fundamentals of Algorithms, Perception In Robotics, NLP, Data Visualization

SANT GADGE BABA AMRAVATI UNIVERSITY *Amravati, Maharashtra, India*
B.E in Computer Science and Engineering {GPA: 9.11 / 10.0} *March 2013 - September 2017*
- Ranked 7th on the university merit list for Computer Science (2017)
- Coursework: Data Structures, Operating Systems, Theory of Computation, System Software, DBMS, Computer Networks

EXPERIENCE

Active Perception Group, ASU *Tempe, AZ*
Graduate Services Assistant *May 2020 – August 2020*
- Researched topics in areas such as Robotics, SLAM, 3D Mapping, Computer Vision and Reinforcement Learning Applications and the AV Technology Stack at ASU APG
- Developed a new formulation for Pursuit-Evasion games that lead to the building of a LiDAR-enabled robust and pragmatic pursuit agent
- Improved the capture time of conventional camera-based pursuers by more than 25% using prediction-based pursuit models
- Submitted a research paper to the International Conference on Intelligent Robots and Systems (IROS)

Arizona State University *Tempe, AZ*
Graduate Teaching Assistant *August 2019 – December 2019*
- Instructed undergraduate students for the course CSE 110 - Principles of Programming (Java)
- Conducted recitations which consisted of live coding sessions, held Office Hours, and graded examinations for a class of 100+ students

Sahir Projects *Pune, Maharashtra, India*
Machine Learning Engineer (Software Development) *July 2018 – July 2019*
- Engineered a Machine Learning proof-of-concept exercise resulting in the eventual adoption of a Machine Learning framework by the company
- Synthesized 100k training samples for the exercise by making use of random normal distributions, labeled using a complex rule-based system
- Designed a machine-learning pipeline to predict the probability of winning a bid using a Random Forest classifier for exhibiting low bias, resulting in 3x more monthly bids placed
- Pioneered a 9% increase in the number of bids won compared to the last financial quarter

PROJECTS

Active Pursuit using Domain Agnostic Prediction *IROS'21*
Python, Tensorflow, PyTorch, OpenCV
- Produced more accurate estimations of an evader's future location (up to 0.019 meters) compared to a Particle Filter-based approach by proposing the use of an encoder-decoder LSTM as a predictive model
- Facilitated a 26% faster capture of the evader as demonstrated by the evaluation of this approach via setting up pursuer and evader vehicles in a MORSE environment
- Generated empirical proof showing the proposed method to be domain agnostic i.e, without the explicit need to retrain the prediction module by evaluation in a CARLA environment (low mean prediction RMSE over 100 runs)

The Scope of Human-Computer Interaction
Java (Backend), XML (Front-End), OpenCV, Android Studio (IDE)
- Elevated the UME rating for conventionally used Navigation Interfaces from 3.5 to 4.7/5.0 by designing an AR-enabled android application that obtains information about any location viewed from the device camera
- Supervised the process of constructing the interface featuring an Augmented-Reality overlay containing information about the target location on the screen of the host device
- Reduced on-device execution times by over 10% by implementing a pipeline for processing raw sensor data and rendering the overlay by leveraging the Android Studio IDE
- Led a 4-member team to first place in National Paper Presentation Threshold'17

ADDITIONAL

Technical Skills (Languages):::Python, Java, C++, C#, HTML5 / CSS3, JavaScript, SQL
Frameworks / IDEs / Libraries / Software: OpenCV, Tensorflow, PyTorch, Theano, Keras, Numpy, Seaborn, Matplotlib, Pandas, Scikit-Learn, Kubernetes, Google Firebase, Google Cloud, Android Studio, AWS, Rest API, Git Version Control, macOS, Linux (Debian Packages), NVIDIA CUDA, Windows, Office Suite, Google Suite
Certifications & Training: OpenCV, SSD, and GANs, Machine Learning, Deep Learning, Android Application Development, Web Development, AWS Fundamentals Specialization