Prasanth Buddareddygari

Website   **LinkedIn**   **Email**

EDUCATION

Master of Science in Computer Science   GPA: **4.00** / 4.00
Arizona State University, Tempe, AZ   Graduating May 2021
Bachelor of Technology in Computer Science and Engineering
National Institute of Technology, Warangal, India   Graduated May 2017

EXPERIENCE

Master's Thesis – Arizona State University, Tempe, AZ   Jan 2020 – Present
- Research and development on reliability and robustness of autonomous driving system through adversarial attacks on Deep Reinforcement Learning agents and environment using PyTorch framework.
- Implemented targeted adversarial attacks by manipulating agent observations in OpenAI Gym's CarRacing-v0.
- Reproduced a stronger model-based adversarial attack on self-driving agent by creating dynamics model using variational autoencoder (VAE) and recurrent neural networks (RNN) using second order optimization method.

Software Development Engineer Intern – GoDaddy, Remote, AZ   May 2020 – Present
- Developed LINE messenger bot from scratch for GoDaddy in south east Asia region. This helped more than 200 million users to purchase products in the app with ease. Currently, integrating chatbot with live agent. Designed and developed multiple RESTful APIs to track followers and send push notifications of products.
- Developed multi-lingual conversation experience for GoDaddy customers to purchase professional email in Facebook Messenger app. This eased more than 1.5 million users to purchase the product within minutes.
- Implemented the services in Java using Dropwizard framework and deployed the service in Amazon Elastic Kubernetes Service (EKS).

Data Engineer – Target, Bangalore, India   Jul 2017 – Aug 2019
- Created automation process for validation and recovery of fulfillment centers operations data in Hadoop through Apache Oozie, Sqoop and Hive. Brought down the running time of the process by 25%.
- Enhanced data parser application to reduce the number of files writable to Hadoop Distributed File System. Resulted in the improvement of Hive query performance by 40%.
- Created production tables in Hive that are rapidly used by more than 5 teams across the enterprise.

PROJECTS

Pursuit Evasion Game [Python, Gazebo, SLAM, MobileNet]   Mar 2020 – Apr 2020
- Developed a pipeline to track human with turtlebot in Gazebo using SLAM, autonomous navigation, and SSD algorithm. Estimated depth and human position using bounding boxes and triangular approximation.

Real-time Object Detection in Cloud for Surveillance Systems [Python, YOLO, AWS]   Jan 2020 – Mar 2020
- Developed autoscaling architecture to minimize the latency of object detection in videos captured by Raspberry Pi using Amazon S3, SQS and EC2. Used pretrained DarkNet with YOLO algorithm to detect objects.

Cartoon Generation for Human Faces [Python, PyTorch]   Oct 2019 – Dec 2019
- Implemented Conditional Generative Adversarial Networks (CGAN) to generate cartoon face image based on given human face image. Applied the CGAN to transfer CelebA source dataset to CartoonSet target dataset.

Detection of Acute Lymphoblastic Leukemia [C++, OpenCV]   Aug 2016 – Jan 2017
- Extracted features such as area, circularity, solidity etc. from microscopic blood images and trained an SVM model to classify healthy vs unhealthy cells and achieved an overall accuracy of 86.66%. Publication link.

SKILLS

- **Languages** – Python, Java, C++, SQL, React JS
- **Frameworks / Libraries -** PyTorch, OpenAI Gym, Dropwizard, AWS
- **Big Data** – Hadoop, MapReduce, Hive, Sqoop, Oozie, Spark, Kafka
- **Tools** – Git, Jenkins, Drone, Docker, Jira
- **Coursework** – Computer Vision, Robotics Perception, Artificial Intelligence, Machine Learning, Applied Linear Algebra, Cloud Computing, Data Structures and Algorithms.

ACTIVITIES

- Contributor to Open-source textbook, d2l.ai
- Participant at HackTech 2020, CalTech.
- Lead a team at Target Hackathon, 2018
- Sub Coordinator at Technozion 2015, NITW.

AWARDS & HONORS

- MORE award from ASU for Spring 2021.
- Engineering Graduate Fellowship from ASU.
- Quarterly award for Q2, 2018 at Target.
- JEE National Merit Scholarship from MHRD, India.