ASHWIN RAVINDRA BHARADWAJ

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EDUCATION

Northeastern University, Boston, MA *Sept 2023 - Current*
Master's in Artificial Intelligence - 4.0/4.0

PES University, Bangalore, Karnataka, IN *Jul 2017 - Jun 2021*
Bachelor of Technology in Computer Science and Engineering - 8.89/10
Twice recipient of CNR Rao Merit Scholarship (2017 and 2018)

SKILLS

- **Languages**: C, C++, GoLang, Python, Java, React, JS
- **Tools**: Git, Tensorflow, Keras, Docker, Kubernetes, RasberryPi, Micro controller programming

WORK EXPERIENCE

Cisco Systems, Bangalore *Jan 2021 - Aug 2023, Software Engineer*
- Worked on a product called "Intersight". As part of the project worked with GoLang, C++ and Python.
- Wrote firmware for servers such that they can be configured remotely.
- Decreased deployment time by auto generating mocks and utilities.
- Developed efficient multiprocessing frameworks for processing data from multiple sources and persisting them in a DB at scale.

Microsoft Innovation Lab, Bangalore *May 2019 - Aug 2020, Intern*
- Mentored a team to develop a web app that aided in the understanding of concepts in data structures and AI
- Worked with a group of peers to develop a model that could associate artistic depiction of South Asian mythology with their description in the holy texts.
- The model used a myriad of Neural network models aided by a graph-based algorithm to gather information from the images.

ACADEMIC PROJECTS

- **Smooth body hydrodynamics using ML** *Jan 2019 – Mar 2019*
  - Currently developing a ML model to simulate the physics of a fluid in a container.
  - Using a new technique the difference between the actual simulation and the predicted ML output is lower compared to existing results.
- **Genetic algorithm used to control robot arms** *Oct 2023 - Dec 2023*
  - Developed an algorithm to train agents using a genetic algorithms to control simulated robot arms to perform various tasks.
  - Developed a new technique to train genetic algorithms quicker using multiple scoring function to simulate biological learning.
- **Video Photogrammetry** *Jan 2021 - May 2021*
  - Build a system from scratch that converts a video taken with an ordinary camera to a point cloud that could be interacted with by the user.
  - Two approaches were explored, firstly using ML (U-net model with transfer learning) and secondly using stereoscopy aided by environmental cues.

OTHER PROJECTS

- **MBTA Bus Tracker** *Jan 2024*
  - Built a simple website to track the buses operated by the MBTA.
  - The main focus of the website is give accurate location of all buses in the Boston area.
  - Uses the MBTA-V3 APIs to track the location of the buses and the stops. Also provides estimated time of arrival.
- **Virtual Reality Glove** *Jan 2019 – Mar 2019*
  - Built a glove that collects the orientation of the hand and the positions of the fingers using an IMU and potentiometers and relays the data to a computer over Bluetooth to enable the user to control the cursor or characters in video games.
  - Compatible with games made on the Unity engine.

PUBLICATIONS

A. R. Bharadwaj, S. S. Chandra, D. S. Nair, A. R. Hatim and A. Ravikumar, "Automated mythological scene recognition using machine learning and graphs", 2020 International Conference on Artificial Intelligence and Signal Processing (AISP), Amaravati, India, 2020, pp. 1-5, Jan 2020.

Ashwin R. Bharadwaj, Hardik Gourisaria, Hrishikesh Viswanath, "Video Frame Rate Doubling Using Generative Adversarial Networks", Computer Communication, Networking and IoT (ICICC 2020), Bengaluru, India, Aug. 2020