BHARATH SREENIVAS

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Skills

PROGRAMMING LANGUAGES

Python
C
Java
Javascript
C#
Angular JS
Standard ML
HTML/CSS
SQLite
MATLAB

TOOLS

Pandas
Scikit-Learn
ROS

COURSEWORK

Introduction to Machine Learning
Concepts in Artificial Intelligence
Imperative Computation and Data Structures
Intro to Computer Systems
Distributed Systems
Parallel and Seq. Data Structs and Algos
Principles of Functional Programming
Theoretical CS
Discrete Math
Linear Algebra

Education

Carnegie Mellon University — Dec. 2022
B.S. Computer Science (Machine Learning Concentration)
Dean's List High Honors
GPA: 4.0/4.0

Illinois Math and Science Academy — Aug. 2016 to May 2019

Employment

Carnegie Mellon University School of Computer Science — Pittsburgh, PA
Teaching Assistant for 15-213: Introduction to Computer Systems — Jan. 2021 to Current

Carnegie Mellon Racing — Pittsburgh, PA
Driverless Car Engineer — Aug. 2020 to Current

- Researching technologies to develop a fully autonomous racing car to compete in Formula Student Driverless Championship
- Leveraging computer vision and robotics tools in **Python** and **ROS** to develop Rapidly-Exploring-Random-Tree algorithm for vehicle path planning

Relativity, Software Engineering Intern — Chicago, IL
Structured Analytics - Email Threading Team — May 2020 to Aug. 2020

- Used data analytics concepts to to optimize email review by arranging entire email conversations in sequence and identifying inclusive documents
- Used **C#** and **Angular JS** to implement API's that improved workflows on production software
- Enhanced UI for more streamlined customer experience
- Merged 19 pull requests to 2 repositories and 3 release branches
- Worked in Agile development environment for maximum productivity

Carnegie Mellon University Robotics Institute — Pittsburgh, PA
Research Assistant, Reliable Autonomous Systems Lab — Aug. 2020 to Jan. 2021

- Developing computer vision tools with **Python** and **OpenCV**, leveraging libraries such as **OpenFace**
- Using image classification/object detection to automate facial video analysis and detect emotion to train automated robotic tutor

Research Assistant, Biorobotics Lab — Pittsburgh, PA, Sept. 2019 to Jan. 2020

- Developed software using **Python**, **ROS** and **CUDA** for TRACIR Force Feedback Project
- Analyzing forces on needle insertion into phantom flesh in order to determine when and how far needle is inserted into skin
- Aiming to develop automated injections during surgery

Projects

Battlecode 2021 — Jan. 2021

- Developed an AI player in **Java** to strategically manage a robot army to defeat enemy teams
- Leveraged pathfinding and distributed algorithms to make player as competitive as possible
- Implemented custom libraries and bit-packing methods to optimize bytecode usage
- Qualified for finals tournament; finished top 10 out of 250+ teams internationally

Web Proxy Server — Nov. 2020 to Dec. 2020

- Built web proxy in **C** which acts as an intermediary between client processes and servers
- Utilized network programming and concurrency techniques to process HTTP requests and forward them to server process

CS and Game Theory Research, Northwestern University — Aug. 2017 to Aug. 2019

- Developed computational simulations in Python and MATLAB to determine optimal pricing strategies for wireless service providers
- Published Technical Paper "Duopoly Competition in Advertising-Sponsored Wi-Fi Provision" at W.I.T.S. Conference

Activities

FRC: Titan Robotics 2022 · Design Captain — Aug. 2012 to Aug. 2019

- Led design team responsible for building and coding competition robot per FRC specifications
- 2019 Regional Design Quality Award recipient

CMU Sahara · Lead Dancer — Aug. 2019 to Current

- Lead dancer on competitive Bollywood Fusion team
- Compete at various competitions nationwide through the DDN circuit