Sousheel Vunnam

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EDUCATION

UNIVERSITY OF COLORADO, BOULDER (2016-2020)

Applied Math + Computer Science B.S. (Double Major), GPA: 3.79

Engineering Honors Program, BOLD Scholar, Dean's List, Andrews Hall Peer Mentor

EXPERIENCE

RESEARCH ASSISTANT, COHRINT LAB AUGUST 2017 - PRESENT

Developing a drone simulation platform to test ground-air robot teamwork. Designing a framework and building an NLP interface for human push commands to robots playing in a cops and robbers game to investigate probabilistic methods for collaborative human robot search. Developed unique strategies for robot evasion using Robot Operating System (ROS) and VICON technologies.

Co-Author: Closed-loop Bayesian Semantic Data Fusion for Collaborative Human-Autonomy Target Search (FUSION, 2018)

APPLICATIONS ENGINEERING INTERN, ARROW JUNE - AUGUST 2018

Collaborated with an interdisciplinary team in building outdoor IoT nodes using LoRaWAN Raspberry Pi gateway technologies. Worked with Semtech engineers and project managers to amplify product experience. Designed and constructed a website using Node.js, Express, MongoDB, and HTML/CSS to display outdoor sensor data.

FOUNDER, AMPLIFIRE (STARTUP SUMMER) JUNE - AUGUST 2018

Initiated a concert crowdfunding company aimed at highlighting local artists and smaller venues. Led a team of 4 to win 2nd place at the pitch competition. Learned various startup business techniques and built a network of passionate individuals in Boulder.

COURSE ASSISTANT, CU BOULDER AUGUST - DECEMBER 2017

Held office hours for CSCI-2270: Data Structures to assist and further students knowledge as well as create discussion.

RESEARCH ASSISTANT, CU IRONLAB MARCH - APRIL 2017

Conducted experiments to analyze gestural human-robot interaction to find which movements allowed for most intuitive control of robots. Implemented the most effective gestures into movement of TurtleBots using Leap Motion and Kinect sensors.

PROJECTS

SKI-U SEPTEMBER - DECEMBER 2017

Carpooling website to get CU students to the mountains for skiing and snowboarding.

DEEP Q-NETWORKS PLAYING MS.PACMAN AUGUST 2017

Actor-Critic agent modeled off of "Playing Atari with Deep Reinforcement Learning" (Mnih et. al.) to play Ms. Pacman using OpenAI Gym and TensorFlow.

DYVISUAL JUNE - AUGUST 2017

Reactive visual jockeying program built with C++ for one man audiovisual experiences.

ADDITIONAL INFO

Activities: Writer/Reviewer (Electronic Colorado), NSBE, Robosub

Languages: English (Native), Telugu (Speaking), Spanish (Reading)

Technical Experience

Languages:
Python
C++
Javascript
SQL
Matlab
Scala
R

Robotics/ML
ROS
PyTorch
Keras

Web:
MongoDB
MEAN Stack

Other:
Unix/Bash
Git
AWS
Agile
Android Dev

Relevant Coursework

CU Boulder
Data Structures
Computer Systems
Software Dev
Applied Probability
Chaotic Dynamics
Algorithms
Operating Systems
Matrix Methods
Markov Processes
Theory of Computation

Audited
Machine Learning
CNNs for Visual Recognition
Reinforcement Learning