

Sousheel Vunnam

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EDUCATION

UNIVERSITY OF COLORADO, BOULDER (2016-2020)

Applied Math + Computer Science B.S. (Double Major), GPA: 3.69

Engineering Honors, BOLD Scholar, Peer Mentor, Discovery Learning Apprenticeship

EXPERIENCE

RESEARCH ASSISTANT, COHRINT LAB AUGUST 2017 - PRESENT

Researching methods for grounded language learning to augment semantic data fusion techniques. Developing a drone simulation platform using AirSim and Unreal Engine with ROS and Julia integration to test robust probabilistic human-robot teamwork. Built an NLP interface for robots playing in a cops and robbers game. Developed unique strategies for robot evasion with VICON and Kinect.

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

MEDIA TECHNOLOGIES INTERN, NBCUNIVERSAL JUNE - AUGUST 2019

Leveraged existing desktop architecture to the cloud for remote use during the 2020 Olympics. Designed support and monitoring solutions for 1,000 AWS workspaces using PowerShell. Learned employee and project management methodologies. Developed augmented reality for Universal Studios theme park using ARCore.

TEACHING ASSISTANT, CU BOULDER JAN - MAY 2019, AUG - DEC 2017

TA for Chaotic Dynamics (2019) and Data Structures (2017). Held office hours to further students knowledge and create discussion. Graded assignments and exams.

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.

PROJECTS

THE CREEPER MARCH 2019

Text-based cybersecurity puzzle RPG built on Python, Word2Vec, and Pico-8.

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.

ADDITIONAL INFO

Activities: Music Journaling (Electronic Colorado), NSBE, Robosub, Skiing, Skating

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

Technical Experience

Languages:

Python
C++
Javascript
SQL
Matlab
Scala
R
PowerShell

Robotics/ML

ROS
PyTorch
Keras

Miscellaneous:

Unity + Unreal Engine
AWS
MEAN Stack
Android
Unix/Bash
Git
Agile

Relevant Coursework

CU Boulder

Data Structures
Computer Systems
Software Dev
Algorithms
Operating Systems
Matrix Methods
Programming Lang.
Markov Processes
NLP
Computer Vision
Bayesian Stats
Advanced Robotics

Audited

Machine Learning
CNNs for Visual
Recognition
Reinforcement
Learning