ANTHONY LOWHUR

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vanstorm9.github.io
vanstorm9

Actively seeking fulltime for 2019 focused on machine learning or computer vision research and development

Education

Rutgers University, New Brunswick
Bachelors: Computer Science 2019
Minor: Japanese 2019

Study Abroad: Tsuru University, Japan
Feb-Aug 2017

Skills

LANGUAGES

Python
C
C++
Java
Javascript
SQL
PHP
C#
MATLAB
HTML
CSS
Prolog
ASP Sparc

PLATFORMS + LIBRARIES

OpenCV
Sklearn
Pandas
Tensorflow
Unity3D
Vuforia
Keras
Node.js
OpenAI Gym
Amazon Web Services
React
Jenkins
Pytorch

HARDWARE

Leap Motion
Microsoft Kinect
Arduino
Raspberry Pi
Oculus Rift

Work Experience

Rutgers University, New Brunswick — New Brunswick, New Jersey
Computer Vision & Machine Learning Research Assistant — Sept. 2015 to Current
- Accomplished trash segmentation from beach with histogram backprojection, bag of words, and SVMs for autonomous drone in Python OpenCV and Tensorflow Keras.
- Investigated 3D object recognition algorithms that uses point cloud data extracted from the Microsoft Kinect.
- Used convolutional neural networks and segmentation algorithms for object recognition & localization for Amazon Challenge Robot in Python OpenCV and Tensorflow Keras.
- Coordinated team of engineering students (senior undergraduate & master graduates) for the development of the autonomous robot.
- Currently designing classifier to create segmentation masks on medical images using U-nets.

Prudential Financial — Roseland, New Jersey
Software Engineering — June 2018 to Aug. 2018
- Implemented canny edge detection and morphological transform to be used for whitespace detection for text placement, saving content writers a lot of time in Python OpenCV.
- Made article summarizer ranking based on word frequency, enable employees to read important documents from minutes to a matter of seconds in Python using NLTK.
- Designed web scraping and headless browser scripts to retrieve texts and images from multiple sources and automatically publish them to digital signage in Python.
- Designed an automated flyway database migration pipeline using Jenkins that monitors and notifies users of build failures, lowering error response time.

Texas Tech University — Lubbock, Texas
AI Research Intern — June 2016 to Aug. 2016
- Built a decentralized multi-agent intelligence that will surround and capture fleeing adversarial agent with team of ally agents.
- Utilized matplotlib and kinematics to design simulator while implementing swarming algorithms.
- Abstract was accepted to the National Conference On Undergraduate Research (NCUR 2017) at the Memphis, Tennessee.
- Also created an AI that preforms vaccine recommendations using declarative programming.

Lehigh University — Bethlehem, Pennsylvania
Computer Vision & Machine Learning Research Intern — June 2015 to Aug. 2015
- Achieved emotion recognition with dense optical flow and SVMs, resistant to unique facial features and poor lighting, on a robot in Python.
- Research paper presented and published as 1st author at the 2015 IEEE 12th International Conference (MASS) in Dallas, Texas.

Freelance Work
Software Developer — Sept. 2016 to Current
- Leveraged deep learning algorithms to create efficient soccer ball tracker for DribbleUp, making its way into a production environment.
- Designed pure computer vision solution to create real-time clay pigeon tracker & hit/miss recognizer with impact strength analytics, making its way into production.

Personal Projects

AI Algorithmic Melody Generator
- AI analyzes music structure from song to generate original music using LSTM neural networks.
- Attempting to make full AI song composer, an AI that can generate entire songs with a series melodies.

Road Segmentation for Autonomous Vehicles
- Used histogram backprojection and morphological filtering to preform road segmentation for a self-driving car startup.
- Able to recognize roads in noisy environment.

More projects on my website!

Publications

Dense Optical Flow Based Emotion Recognition Classifier October 2015
- 1st author paper publication on 2015
- IEEE 12th International Conference on Mobile Ad Hoc and Sensor Systems in Dallas, Texas
- Anthony Lowhur (Rutgers), Mooi Choo Chuah (Lehigh)