

Shivam Agrawal

github.com/ShivamHacks | shivamhacks.github.io

EDUCATION

University of Maryland, College Park
B.S. in Computer Science and Mathematics

GPA: 3.96
Expected Graduation: May 2020

Quality Enhancement Systems and Teams (QUEST) Honors Program, Cohort 31

- Admitted into selective multidisciplinary - business, engineering, and science - program focused on data-driven process improvement, design, and quality.

EXPERIENCE

Capital One Machine Learning Summer Fellow

College Park, MD

The University of Maryland First Year Innovation and Research Experience

June 2018 - July 2018

- Member of research team focused on computer vision, a field in artificial intelligence.
- Helped design a new model for video instance segmentation to be entered into the DAVIS 2019 challenge.
- Wrote mask propagation module that predicted the silhouettes of objects in a video based on the silhouettes in previous frames and estimated motion of the pixels (optical flow) using a fully convolutional neural network.
- Created Python wrapper for the DAVIS 2016 dataset including a Keras data generator that formatted the data and performed representative sampling on the fly, enabling the entire team to easily use the dataset.
- Worked with Tensorflow, Keras, OpenCV, and NumPy.

Engineer

College Park, MD

The Diamondback Lab

February 2018 - Current

- Part of the technology team supporting the official UMD Student Newspaper.
- Executing the transfer of current website from The Arc platform to the Wordpress platform.
- Using Google Analytics to understand our readers and optimize their online experience.
- Tracking mouse movement, time spent, location, sites visited, and referral traffic.

Web Developer

Edison, NJ

GNext Education

September 2015 - December 2015

- Created and managed website and social media for the company's premier robotics competition, SALL Champs.
- Developed a real time forum for parents to post questions and comments during the competition using the PubNub API, Parse cloud storage, HTML, CSS, and Javascript.

PROJECTS

PlannrBot

Winner: Top Ten Hacks - HopHacks Winter 2018

- Built a voice enabled bot that helps plan vacations, create packing lists, and inform the user of travel conditions.
- Created an interface that would display what the user was saying and highlight the phrases the NLP algorithm processes in real time to visualize what the algorithm is "understanding".
- Written in Python using pretrained language models from spaCy library, and Google and Yahoo APIs.

BusNotify

PennApps Fall 2016

- Android app that predicts bus arrival time. Using motion detection to identify when people at earlier stops get onto the bus, along with traffic estimations, the app predicts the arrival time of the bus at future stops.
- App built in Java using the Android Motion Sensor API. RESTful server written in NodeJS.

ACTIVITIES

Quantitative Finance Society

- Researching techniques and strategies for algorithmic trading. Testing algorithms on Quantopian platform.

Change the World Consulting

September 2017 - December 2017

- Worked with a team of undergraduates to provide pro bono marketing guidance to Baltimore-based theater.

SKILLS:

Languages: Java, Python, C, Javascript, HTML, CSS

Libraries & Platforms: Keras, Tensorflow, OpenCV, MongoDB, Amazon Web Services, ReactJS, Arduino

Selected Coursework: OOP, Computer Systems, Linear Algebra, Applied Statistics and Probability