Sadat Shaik

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Education

University of Pennsylvania
2015 – 2019
GPA: 3.74 / 4.00
Major: Computer Science

Downingtown STEM Academy
GPA: 4.0/4.0

Experience

Bentley Systems – Exton, PA

Strategic Technology Advancement Intern, Summer 2016

Given a house, mall, or other large structure, our goal was to create an iOS app that generates a flight path for a quad-copter to follow to take the perfect pictures for 3d model generation.

- Implemented "Exclusion Zones" area where the flight path cannot cross.
- Asynchronously generated / cached image to reduce memory usage.
- Suggested, then implemented collection view for the user to see missions.
- Implemented ability to specify points by drone rather than screen tapping.
- Integrated internal Bentley Geom API.
- Optimized code readability / workflow by merging functionalities of separate screens and organizing code

University of Pennsylvania – Philadelphia, PA

Teaching Assistant

- CIS 160 – Mathematical Foundation for Computer Science, Spring 2016
- CIS 121 – Data Structures and Algorithms, Fall 2016 - Current
- Prepared recitation, graded exams / homework, co-led office hours weekly

Undergraduate Research Intern – GRASP Laboratory

- Successfully created a C++ program that would dynamically create a 3D model of the surrounding environment using data gathered from a phone mounted on a quad-copter.
- Implemented Scale-Space reconstruction, Delaunay Triangulation, Poisson Reconstruction to create 3D model.
- Used RVIZ and ROS to read data from phone and visually display the generated 3D model.
- Created visual cylinder detection for quad-copters using OpenCV and ROS in C++.

Projects

- TravelAR - Augmented reality GPS navigation system for Google Cardboard. Placed top 30 at Pennapps 2016.
- iOculist – iOS app that calculates visual acuity. Uses facial recognition to find distance. Won 2nd place, HackBCA
- Vox – Created box that functions as music controls. Tap on desk to pause, rotate to increase volume. Pennapps 2015
- Internship Website – Created website to handle internship matching process for high school district
- Personal Website – Created portfolio website to display projects (under construction)

Leadership

- Lead organizer of UPenn Robotics Fair – Raised $2000, 70+ students attended, 7 distinguished STEM speakers
- Lead organizer of STEMHacks – Raised $10,000 +, 200 + register, ~70 attend, Judges were CEO's
- Member of Hacking & Learning team in Dining Philosophers – Goal of team is to increase CS exposure on campus

Honors / Achievements

- Dean's List 2015-2016
- *Using Simulations to Solve Newton's Equations for Astronomical and Other Systems* – Published in PGSS 2014 Journal
- FBLA: 2nd place Cyber Security Regionals, 3rd place Cyber Security States
- National Merit Finalist

Relevant Classwork

- CIS 160 (Mathematical foundation for computer science), CIS 121 (Data structures & algorithms), CIS 120 (programming languages & techniques), CIS 240 (Introduction to computer systems), CIS 262 (Automata computability & complexity), CIS 197 (Javascript)

Skills

Languages: Java, Objective-C, C++, JavaScript, Python, OCaml, PHP, SQL, and XHTML, JSP, CSS, C#
Technologies: JQuery, NodeJS, Bootstrap, XCode, MySQL, Git, OpenCV, OpenGL, ROS, Unity, Raspberry Pi, Arduino
Competencies: iOS Development, Web Development, Machine Learning, Computer Vision, Robotics