Michael Yang

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Education

Rutgers University - New Brunswick   09/2015 - 12/2019
BSc - Double Major in Mechanical Engineering
and Computer Science

GPA: 3.051/4.0

Relevant Coursework: Data Structures, Computer Architecture, Software Methodology, Discrete Structures, Design and Analysis of Computer Algorithms, Principles of Information and Database Management, Computer Security, Heat Transfer, Fluid Dynamics, Aerodynamics, Multiphysics Simulation, Dynamic Systems and Control

Technical Skills

Proficient: HTML, CSS, Java, JavaFX, JavaScript, JavaServer Pages, Python (numpy, pandas), Matlab, MySQL, C/C++.
Familiar: CUDA, PHP, R, MongoDB, Golang, Ruby, Assembly Language. **Technologies:** ArduPilot, ANSYS, SolidWorks, Mission Planner, Robot Operating System (ROS), Linux, Bash, Git, Windows, Atom, Visual Studio Code, Eclipse, Jupyter Notebook, MySQL Workbench, Android Studio.

Experience

NJ Center for Civic Education - Webmaster - Piscataway, NJ   09/2017 - Present
– Maintained and kept website updated using HTML and CSS.

Guardian Life - Information Technology Intern - Holmdel, NJ   06/2019 - 08/2019
– Reverse engineered data marts in the Guardian Life Data Warehouse.
– Created documentation to map the data flow through the data marts.

Senior Design - Team Leader   09/2018 - 05/2019
– Built drones using a Raspberry Pi and a Navio2 shield as the flight controller.
– Designed to drop from a structure equipped with an electromagnet and automatically arm after detecting a downward velocity of greater than 0 m/s.

Rutgers University Applied Fluids Laboratory - Research Assistant - Piscataway, NJ
Indoor Mapping Drone   06/2018 - 09/2018
– Replicated supervising graduate student's Lidar Odometry and Mapping (LOAM) algorithm.
– Migrated algorithm onto a Nvidia Jetson TX1 for use on a drone.

Mazzeo Research Group Laboratory - Research Assistant - Piscataway, NJ
Paper Robotics   06/2017 - 10/2017 | 02/2018 - 03/2018
– Conducted experiments with paper folded using different origami designs combined with nitinol wire or pneumatics as a means of actuation for robotics.

Projects

Motion Tracker (Python) - *github.com/mikebyang/Motion-Detection*   08/2019 - Present
– Detects and outputs information about the objects movement from footage.

Digit and Face Classifier (Java) - *github.com/mikebyang/DFClassifier*   08/2019
– Implementation using Naive Bayes algorithm had a peak accuracy of 76.50% for digits and 84.67% for faces.
– Implementation using the Single Layer Perceptron algorithm had a peak accuracy of 86.70% for digits and 53.33% for faces.

Auction Website (HTML/CSS/JS/JSP/MySQL) - *github.com/mikebyang/Auction-Website*   01/2019 - 05/2019
– Designed and implemented a relational database system to support the operations of an auction system.
– Front end used JSP to connect to the back end and styled using a combination of HTML, CSS, and JS.
– Back end was constructed using MySQL and hosted on the Amazon AWS service.

Extracurriculars

Mechanical Engineering Student Association (MESA) - Webmaster   09/2016 - 05/2019
– Maintained and updated website for MESA with necessary information for Mechanical Engineering students.
– Assisted in planning and organizing events for Mechanical Engineering students.