

# Michael Yang

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## Education

### Rutgers University - New Brunswick

09/2015 - 01/2020

BSc - Double Major in Mechanical Engineering and Computer Science  
GPA: 3.006/4.0

**Relevant Coursework:** Principles of AI (Graduate Course), Software Engineering, Computer Security, Data Structures, Computer Architecture, Discrete Structures, Design and Analysis of Computer Algorithms, Principles of Information and Database Management, Heat Transfer, Fluid Dynamics, Aerodynamics, Multiphysics Simulation

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## Technical Skills

**Proficient:** Python (numpy, pandas), HTML, CSS, Java, JavaScript (Node.js, jQuery), JavaServer Pages, Matlab, MySQL.  
**Familiar:** Swift, Kotlin, C/C++, CUDA, PHP, MongoDB, Golang, Ruby, Assembly Language. **Technologies:** ArduPilot, ANSYS, SolidWorks, Linux, Bash, Git, Visual Studio, Eclipse, Jupyter Notebook, MySQL Workbench, Android Studio.

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## Experience

### NJ Center for Civic Education - Webmaster - Piscataway, NJ

09/2017 - 12/2019

- Maintained and updated the website as needed using knowledge of HTML and CSS.
- Troubleshoot any technical issues that arose and provided possible solutions.

### Guardian Life - Information Technology Intern - Holmdel, NJ

06/2019 - 08/2019

- Reverse engineered data marts on the Guardian warehouse to determine the flow of data.
- Created documentation and diagrams to be used by the team to backtrack and view data sources.

### 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.
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## Projects

### Form Checker (Python) - <https://github.com/mikebyang/Form-Checker>

04/2020 - Present

- Aimed at applying Mask R-CNN to reduce a subject in a video into a simplified frame consisting of points located at areas designated as points of interest and line segments connecting those points.
- Form of the subject in the video is compared to the form of athletes using simplified form to verify form is correct.

### Antagonists (Javascript) - [github.com/mikebyang/Antagonists-Simulation](https://github.com/mikebyang/Antagonists-Simulation)

10/2019 - 01/2019

- Created AI which would develop a strategy to win an adversarial game which plays off the idea of the Lotka-Volterra Model.
- Used NeuroEvolution of Augmenting Topologies (NEAT) algorithm to develop neural networks.

### Digit and Face Classifier (Java) - [github.com/mikebyang/DFClassifier](https://github.com/mikebyang/DFClassifier)

08/2019

- Implemented the naive Bayes algorithm and the single layer perceptron algorithm to create multiple classifiers.
- Measured peak performance was 84.7% for naive Bayes algorithm and 86.7% for the single layer perceptron algorithm.

### Auction Website (HTML/CSS/JS/JSP/MySQL) - [github.com/mikebyang/Auction-Website](https://github.com/mikebyang/Auction-Website)

01/2019 - 05/2019

- Designed and implemented a relational database system on AWS to support the operations of an auction system.
  - Front end used JSP to connect to the back end and was styled using a combination of HTML, CSS, and JS.
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## Extracurriculars

### Master The Mainframe 2019 | IBM

09/2019 - 01/2020

- Gained experience performing programming and application development tasks on the z/OS platform.
- Completed and obtained the badge for Master The Mainframe 2019 - Part 2.

### 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.