# Angelo Carrabba

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## Education

**Clemson University** **August 2014–May 2018**

- General and Departmental Honors (Calhoun Honors College) GPA: 3.82/4.00
- Bachelor of Science in Computer Science
- Minor in Mathematical Sciences

## Programming Languages

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|---|---|---|---|---|---|---|
| **General:** | C++ | Python | Java | C# | C | R |
| **Web:** | JavaScript | HTML/CSS | React | TypeScript | AngularJs | |

## Research

**Data Mining Research, Algorithms and Computational Science Lab @ Clemson Fall 2017–Now**

- Comparing research papers' abstracts (only) and full-texts (including abstracts) as data input for research hypothesis generation algorithm.
- Working on increasing quality of data by extracting relevant data from full-texts.
- Preprocessed text, used regex and NLTK to parse text, applied LDA Topic Modeling and FastText.
- Worked with large data input (over 1 million documents; over 30gb of textual data).

**Research Assistant, Human-Centered Cloud Robotics @ Clemson** **Fall 2016**

- Analyzed pubsub architectures performance in real-time environments through MiniNet.
- Created network topologies and then simulations in python.
- Collected data/created graphs and plots to analyze difference in performance of MQTT and Kafka.

**REU Program @ Rutgers University with DIMACS** **Summer 2016**

- Studied agent interaction in multi-agent environment.
- Created simulations in python with graphical representation using pygame.
- Developed path planning algorithm to monitor traffic increase caused by parameter changes.
- Wrote a research paper on results.

**Research Assistant, Applied Algorithms Lab @ Clemson** **Spring 2016**

- Implemented efficient DTW Search in JavaScript based upon research paper.
- Ran on EEG data in order to search for spikes indicative of epilepsy.

**Research Assistant, Virtual Environment Group @ Clemson** **Fall 2014–Spring 2015**

- Designed/wrote computer vision software in C for calibrating camera image distortion, with edge detection processing.
- Mapped nonlinear equations to plane, then created function to map input location to real coordinates.

# Work

### WSBF Radio Station Computer (Software) Engineer @ Clemson — Fall 2017

- Building music playing software on Electron Framework with Angular (for DJ and automation use).
- Maintaining website functionality, as well as adding new functionality.

### Full-Stack Software Engineering Intern @ Blackbaud — Summer 2017

- Created database monitoring software with web technologies (angular based on ASP.NET framework).
- Wrote software for editing and manipulating data within database.
- Created algorithms and data structures for connecting data flow between different database pods.

### Lab Teaching Assistant @ Clemson — Fall 2016–Spring 2017

- Co-taught Algorithms and Data Structures lab as well as CPSC 1020 lab.
- Graded lab assignments and homework for Algorithms and Data Structures.

# Team

### Programming Team @ Clemson — Fall 2015–Fall 2017

- **South East Regional Programming Competition** — Placed: 10th out of 45 (**Fall 2017),** 14th out of 45 (**Fall 2016**)
- **Mercer Programming Contest** — Placed: 6th out of 37 (**Spring 2017**), 7th out of 40 (**Spring 2016**)
- **NAIPC Invitational Programming Competition** — Placed 86th out of 200 (**Spring 2016**)

### CUHackIt Logistics and Web Development (Clemson Hackathon) — Fall 2017–Now

- Working with other clemson students to put together CUHackIt, Clemson's first undergraduate student run Hackathon

### HackGT (Hackathon @ Georgia Tech) — Fall 2017

- Applied LDA Topic Modeling to recipe database then ran k-nearest neighbors to generate adjacency matrix
- Set of documents and word counts were recipes and ingredient counts, respectively.
- Created web-app to walk through graph generated from nearest neighbors in recipe embedding space.

### Off The Grid (Company sponsored hackathon @ Blackbaud) — Summer 2017

- Created form sign up tracking in order to generate graph of form spread to monitor outreach rate.

# School

### Deep Learning with NVIDIA Tesla P100 GPUs (Capstone Project @ Clemson) — Fall 2017

- Helped orchestrate setup of hardware architecture for deep learning (server and software).
- Creating tool through google deep-dream and tensor flow to express learned features and layer outputs together.

# Personal

### Website Development @ acarrab.github.io — Fall 2017

- Developed personal website with React and Typescript.
- Developed navigation for my older website in which navigation was done through graph of nodes representing pages.