Jared Coleman

https://www.jaredraycoleman.com

jaredraycoleman@gmail.com

Summary

I have a broad interest in computer science. My research interests include discrete mathematics, computational geometry, game theory, graph theory, distributed computing, automata theory, programming languages, formal methods, and mobile robotics.

Education

University of Southern California — Long Beach, CA
Ph.D. in Computer Science; GPA: N/A — *Aug 2020 – Present*

California State University, Long Beach — Long Beach, CA
Master of Science in Computer Science; GPA: 4.00 — *Aug 2018 – May 2020*

California State University, Long Beach — Long Beach, CA
Bachelor of Science in Computer Science; GPA: 3.6 — *Aug 2013 – May 2018*

Experience

The Aerospace Corporation — El Segundo, CA
Casual Member of the Technical Staff — *Aug 2020 – Present*
Member of the Technical Staff — *Mar 2020 – Aug 2020*
Associate Member of the Technical Staff — *Sep 2018 – Mar 2020*

- Develops algorithms for optimizing data-processing pipelines to maximize time and resource efficiency.
- Helps build simulations for verifying flight software.
- Designs software that helps Aerospace rapidly develop scalable, modular, and efficient analyses for launch vehicle verification in simulation, day-of-launch, and post-flight environments.

The Aerospace Corporation — El Segundo, CA
Intern — *Jan 2018 – Aug 2018*

- Developed tools for automated data processing.
- Worked on algorithms for cooperative mobile robotic systems.
- **Skills Acquired**: Python, distributed algorithms, graph theory

CSULB Research Foundation — Long Beach, CA
Student Research Assistant — *Mar 2017 – May 2018*

- Developed software for systems of cooperative robots.
- Developed libraries for distributed robotic simulations.
- **Skills Acquired**: Matlab, C/C++, distributed computing, data structures, algorithms, computer vision

Projects

Aerocube @ The Beach
California State University, Long Beach

- **Supervisors**: Dr. Praveen Shankar (PI), Dr. Oscar Morales Ponce (Co-I)
- Worked with an interdisciplinary team of student engineers to investigate the capabilities of the Nvidia Jetson TX1 as a computational unit in distributed robotics systems for space.
- Developed localization, communication, path planning, and control algorithms.
- **Skills Acquired**: C/C++, networking, distributed computing, teamwork, algorithms, software engineering

Master's Thesis
California State University, Long Beach

- **Committee Chair**: Dr. Oscar Morales Ponce
- **Keywords**: pattern formation, computational geometry, mobile robotics
- A study on optimal pattern formation. Given a set of robots and a target formation, our goal is to find optimal destinations such that the maximum distance any robot must travel is minimum.