KENNY BOWERS

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EXPERIENCE

Motion Planning Tech Lead

Anduril Industries

Oct 2020 – Current Atlanta, GA

- Drove adoption of my robust and extendable fixed-wing algorithms to adjacent products, improving delivery time and minimizing risk for multiple programs.
- Developed technical roadmap and objective prioritization, reaching operational status for programs in short timeframes.
- Directed the algorithm design and C++ implementation for motion planning problems, generalizing where possible to enable near-future programs to quickly iterate.
- Initiated and established team practices for consistent unit testing, continuous integration, code style, and interview process.

Autonomy Research Engineer

Georgia Tech Research Institute

July 2017 – Oct 2020 Atlanta, GA

- Scoped the concept and led the solution design and C++ implementation of novel real-time motion planning algorithms for multi-agent autonomous aerial systems.
- Published three conference papers on fundamental research in bio-inspired swarm algorithms for distributed autonomous multi-robot teams.
- Developed machine learning tools for the team's open-source multi-agent robotics simulator (SCRIMMAGE) to automate parameter optimization and speed up algorithm verification.

Software Engineer

Boeing Research and Technology

June 2014 – July 2017 Charleston, SC

- Published four patents on robotic control and airplane surface inspection.
- Developed algorithms for robot arm path planning and inkjet head control to enable painting artwork directly onto 3D aircraft surfaces. The project was showcased during a POTUS visit.
- Designed a real-time hardware/software solution for inspecting the fuselage for micrometer defects during manufacturing. This included localizing the scanners to the surface of the airplane in order to display defect locations to the operator.
- Led the development of a real-time system to synchronize and calibrate 60+ cameras and sensors across multiple PCs and microcontrollers.
- Managed and designed the Clemson University ECE Senior design project sponsored by Boeing.

STRENGTHS

C++ Python Docker CMake

Algorithm Design System Design Motion Planning Computational Geometry Machine Learning Computer Vision

EDUCATION

M.Sc. in Computer Science

Georgia Institute of Technology

2016 - 2018 (part-time while working full-time)

Robotics and Computational Perception

B.Sc. in Computer Engineering

Clemson University

2010 – 2014

PUBLICATIONS

Patents

- et al., A. B. (2018, 2019). Verification of tow placement by a robot.
- et al., A. B. (2019). Automated controls for contoured surface inkjet printing.
- et al., L. W. (2019). Live metrology of an object during manufacturing or other operations.

Conference Publications

- et al., G. C. (2018). Bio-inspired nest-site selection for distributing robots in low-communication environments, Practical Applications of Agents and Multi-Agent Systems. 30% Acceptance.
- et al., K. B. (2018). Trust-based information propagation on multi-robot teams in noisy low-communication environments, Distributed Autonomous Robotics Symp. 32% Acceptance.
- et al., L. S. (2018). Bio-inspired role allocation of heterogeneous teams in a site defense task, Distributed Autonomous Robotics Symp. 32% Acceptance.