

# Kenneth Shaw

Incoming MSR: CompE + CS in Intelligence at Georgia Tech: [kenny@kennyshaw.net](mailto:kenny@kennyshaw.net)

## Research:

- Georgia Tech Robotics: RAIL Lab (Aug. 2018-present)
  - Robot Autonomy and Interactive Learning lab on ARL's DCIST w/ Prof. Chernova and Dr. Ravichandar.
  - Multiagent task allocation: Capture the Flag scenario in Unity3D and physical robot swarm study using new STRATA algorithm. **(Accepted IROS 2020)**
  - How multi-agent human interactive control can best be predicted and trained by other smaller network-based activities. **(Planning ICRA 2021 submission)**
- Carnegie Mellon Robotics Institute Summer Scholar (2019)
  - Prof. Liu's Intelligent Control Lab on Human-Robot Collaboration.
  - Assignment of optimal tasks for efficiency and interactivity with humans in factories.
  - Interfaced a new to the lab FANUC industrial arm with Dr. Liu's SERoCS platform using trajectory planning algorithm.
- Univ. of Southern California: Institute for Creative Technologies (Summer 2018)
  - Dr. Benjamin D. Nye, Director for Learning Science Research. (REU)
  - MentorPal: Researching the impacts of interactive career mentor technology. ONR.
  - Created new LSTM models for two new interactive mentors and new web enabled frontend.
- VIP (Vertically Integrated Projects) Lightning From Space (Jan 2018-present)
  - New multi-modal communication platform using APRS and cellular for our weather balloons.
  - Warren Batts & Austin Brown Innovation Award leadership scholarship winner.

## Publications (highlights):

- Glen Neville, Harish Ravichandar, Kenneth Shaw, Sonia Chernova, "Modeling Dynamic Traits for Task Assignment in Heterogeneous Multi-Robot Teams," International Conference on intelligent Robots and Systems (IROS) 2020.
- Harish Ravichandar, Kenneth Shaw, Sonia Chernova, "Strata: Unified Framework for Task Assignments in large teams of Heterogeneous Agents," Submitted to Autonomous Agents and Multi-Agent Systems (AGNT), 2019.
- Benjamin D. Nye, Dan M. Davis, Sanad Z. Rizvi, Kayla Carr, William Swartout, David Cobbins, Kenneth Shaw, "Usability and Initial Efficacy of MentorPal, a Framework for Rapid Creation of Virtual Mentors," Submitted to Journal of Research on Technology in Education (JTRE), 2019.
- Davis, D. M., Predovich, K.B., Spaulding, H. & Shaw, K. (2018), "Enhancing Menteeship: Improving Career Selection for Potential DoD Personnel," SISO Fall Simulation Innovation Workshop, Orlando, Florida: SISO.

## Other Projects/Awards:

- National Science Foundation **Graduate Research Fellowship recipient** (2020)
- PennApps Top 30 Award: Used Tensorflow Image recognition to facilitate recycling.
- MIT Launch: Two-Factor Passwords using facial recognition. (Summer 2017)
- FRC Team 293 Robotics (2013-2017, Currently: Advisor)
  - Lead programmer: Led many projects such as Onboard Auto-Targeting System project for "Boulder"/Dodgeball Shot Aiming using OpenCV.
- Bitcoin Mining: Currently specialize in RL/ML for short term trading.
- HackMIT Sia API challenge 1<sup>st</sup> Place: Sia Blockchain for ad supported file storage.

## Education:

- Georgia Institute of Technology:
  - ECE 4560 (Robotics Automation) CS 3630 (Robot Perception), CS 4476 (Computer Vision), CS 4649 (Robot Inteli. Planning), CS 4731 (Game AI), CS 4641 (Machine Learning), CS 4646 (ML for Trading)
- Other:
  - Berkeley: CS 285 (Deep Reinforcement Learning) Audit