‍‍Kenneth Shaw

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Research:

* Carnegie Mellon Robotics Institute Summer Scholar (Summer 2019)
  + Visited under Dr. Changliu Liu’s Intelligent Control Lab on Human-Robot Collaboration
  + Started with task assignment for understanding the optimal tasks for both agents to maximize efficiency and interactivity with factory type group tasks.
  + Worked specifically on a new to the lab FANUC Industrial Robot and simulation, updating Dr. Liu’s SCERoCS platform for StreamMotion joint space trajectory planning.
* GT IRIM RAIL Labs (Aug. 2018-present)
  + Working in RAIL (Robot Autonomy and Interactive Learning) on ARL’s Distributed and Collaborative Intelligent Systems and Technology (DCIST) project.
  + Simulating heterogeneous trait robots from different species of robots that have different distributions of traits for task allocation to team-based tasks.
  + Created a new Capture the Flag scenario in Unity3D/C# and helped with a parallel one on a physical robot swarm on the Robotarium for Monte-Carlo analysis.
* Research Assistant at USC ICT (Institute for Creative Technologies) (Summer 2018)
  + Visiting under Dr. Benjamin D. Nye, Director for Learning Science Research, originally a 10 week NSF REU, extended to 12 weeks for additional development.
  + Worked on the ONR MentorPal project that was researching and understanding the impacts of interactive mentor technology on career choices.
  + Created new ML models for two new interactive mentors and web enabled frontend.
  + Field study at Naval Postgraduate School.
* VIP (Vertically Integrated Projects) Lightning From Space: (Jan 2018-)
  + Developing new usage of a multi-modal communication platform using APRS as well as cellular for bidirectional communication from weather balloon flights to ground.
  + Warren Batts & Austin Brown Innovation Award scholarship recipient

Publications:

* 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
* Kenneth Shaw, Jaskaran Grover, Changliu Liu , “Maximizing agent utility in human-robot collaborative tasks,” Robotics Institute Summer Scholars’ Working Papers Journal, August 2019. CMU.
* Glen Neville, Harish Ravichandar, Kenneth Shaw, Sonia Chernova. “Modeling dynamic traits for task assignment in heterogeneous multi-robot teams,” Submitted to International Conference in Robotics and Automation (IRCA) 2020. IEEE, 2020.
* Dan Davis, Kenneth Shaw, Sanad Rizvi, Mark Davis“Quantum computing: Evaluating Potential Quantification of Projective Psychological Test Scoring,” in MODSIM WORLD 2019. MODSIM, February 2019.
* 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.

Other Projects:

* PennApps Top 30 Winner: Used Tensorflow Image recognition to facilitate recycling
* HackMIT Sia API challenge 1st Place: Used the Sia Blockchain for ad supported file storage
* MIT Launch: Orama (Summer 2017)
  + Two-Factor Authentication with facial recognition API startup
  + Created an adapted dlib algorithm, frontend and communication for a secure client-side vision algorithm.
* ThermoFi Wireless Thermometer and Humidity sensor: (2015-present)
  + Worked to create and sell sensors that monitored the home.
  + Created a server (node.js) which showed monitoring information about the home. (temperature, humidity, air quality etc.)
* FRC Team 293 High School Robotics: (2013-2017 currently: advisor)
  + Lead Control Systems Engineer, President, Robot Driver, Inspector
  + Worked on workshops educating new members on programming.
  + Led many projects such as the Onboard Auto-Targeting System project for “Boulder”/Dodgeball Shot Aiming using OpenCV, on Fine Mechanism Angle Control and Custom Control Boards using TI HID Driver
* Bitcoin Mining: Worked with early GPUs and ASICS to mine Bitcoins. (2013)
  + Admin and founding member of Cryptocurrency Collectors Club on Facebook (currently has 75,000+ members and a wealth of collated information) Very active in the space in general.
  + Currently specialize in trading algorithms for short term positions.

Education:

* Georgia Tech: Computer Engineering/CS Minor in Intelligence (Grad: Spring 2020)