‍‍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
  + Worked specifically on a new FANUC Industrial Robot and simulation running StreamMotion packets for joint space trajectory planning.
  + Used the RSIS Human Robot Collaboration System with a long term as well as a safety planner to enable the robot to navigate with humans efficiently and safely.
  + Begun a study on modelling and minimizing task times in human robot collaboration.
* 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 real-time, bidirectional communication from flight to ground.

Other Projects:

* PennApps Top 30 Winner: Used Tensorflow Image recognition to facilitate recycling
* HackMIT Sia API challenge 1st Place: Began using 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)
  + ECE 2020 (Digital Logic Design), ECE 2036/2035(Programming Hw/Sw), 2026(DSP), ECE 2031 (Digital Design Lab), ECE 2040 (Circuits), ECE 3020 (Math Found.), ECE 3030 (Physical Foun.), ECE 3056(Comp. Arc. Concurr. Energy), ECE 3550 (Feedback Controls) ECE 4560 (Automation and Robotics)
  + CS 1371 (Matlab), CS 1331 (Obj. Ori), CS 1332 (Data Structures and algos), CS 3600 (Intro AI), CS 4649 (Robot Inteli. Planning), CS 4641 (Machine Learning), CS 3630 (Robotics Perception), CS 4646 (ML for Trading), CS 4476 (Computer Vision)