Scott Driggers

Email : m.scott.driggers@gmail.com
Mobile : +1 (843) 309 - 7950
Github : msdrigg

Education

- **Clemson University** — Clemson, SC
  Batchelor of Science in Mathematical Sciences — *Aug. 2018 - May 2021*
  Batchelor of Science in Physics

Experience

- **Poltys Incorporated** — Anderson, SC
  Software Engineer — *Jan 2019 - Present*
  - **Enterprise Smartwatch Health Application**: Created Wear OS application to continuously collect health data and detect falls. Built systems for deployment in Assisted Living Facilities. Developed backend and UI with modern Android archeticture including Kotlin and Android Jetpack systems.
  - **Fall Detection Model**: Built machine learning model with TensorFlow to predict falls using batches of motion sensor data. Organized data collection, training, and integration.
  - **Real Time Location Services**: Developed system for tracking indoor location using a network of bluetooth beacons. Addressed interference, signal variability, and multi-path issues.
  - **Web Development**: Built portal for users to view health data and admin to modify application configurations.
  - **Wearable Hardware Lead**: Worked with manufacturers to develop custom wearable device taylored to our use case.
- **Oak Ridge National Laboratory** — Oak Ridge, TN
  Research Intern — *Summer 2020*
  - **Theoretical Neural Network Modeling**: Studied the behavior and convergence of simple neural networks by varying layer width and layer number. Modeled and visualized the transformation of layer weights of various models as the network structure was adjusted.
- **Clemson University** — Clemson, SC
  Research Assistant — *Jan 2019 - Present*
  - **Atmospheric Ray Tracing**: Created a program to trace rays as they deflect through the atmosphere. High performance library with scipy/numpy code. Supplimented with Rust functions where performance was critical.
  - **SAFARI**: Improved the Python wrapper for a classical ion scattering simulation.
  - **Automation Systems**: Automated temperature reading system using an Arduino program that records resistances from multiple thermistors and calculates temperatures from these measurements. Created an interactive python GUI that communicates with the arduino.
  - **Quantum Ion Scattering Simulation**: Simulated quantum interactions ion scattering off a skewed gold surface. Solving time dependent schrodinger equation using energy states and operators. Derived equations mathematically and then implemented differential equation solver in Python using scipy and numpy.

Projects

- **Auto2FA**: Browser extension that generates 2FA tokens following RSA or Yubikey Token protocol and automatically fill out 2FA forms
- **Covid Data Visualization**: Interactive visualizations of SC Covid cases over time using D3
- **Computational Physics Modeling**: Computational modeling and visualization of physical systems in Python
- **Chickfila Coupon Manipulation**: Producing Chickfila coupons for free sandwhiches by manipulating the survey response portal
- **Agricultural Drone Imaging**: Developed iOS application that automatically captures images of a specified area using DJI drone. Used Near-IR imaging and NDVI to measure health of a crop.

Programming Skills

- **Languages**: Python, Java, Kotlin, Swift, JavaScript, Rust, SQL, R
- **Technologies**: AWS, TensorFlow, Django, D3.js, Linux, Android, iOS