Scott Driggers

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Education

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

Experience

- **Poltys Inc.** — Anderson, SC
  Software Developer — *Jan 2019 - Present*
  - **Android Smartwatch Health Applications**: App for Android to continuously collect health data and detect falls. Developed backend and UI for both systems. Application uses modern iOS and Android archeticture including kotlin,
  - **Fall Detection System**: Fall Recognition system built with TensorFlow that predicts falls using batches of motion sensor data. Worked on training, data collection and integration.
  - **Beacon Location Tracking**: Smart system for tracking indoor location using a network of bluetooth beacons. Addresses interference, signal variability and multi-path issues
  - **Web Development**: Simple portal for users to view health data and admin to modify application configurations
  - **Wearable Hardware Lead**: Worked with manufacturers to develop custom wearable device for deploying health application in enterprise facilities.
- **Oak Ridge National Laboratory** — Oak Ridge, TN
  Research Intern — *Summer 2020*
  - **Theoretical Neural Network Modeling**: Studied the behavior and convergence of simple neural networks as by varying layer width and layer number. Modeled convergence in the weights of various models.
  - **Neural Network Visualization**: Visualized the convergence of weights and the relative performance of different size networks.
- **Clemson University** — Clemson, SC
  Research Assistant — *Jan 2019 - Present*
  - **SAFARI**: Improved the Python wrapper for a classical ion scattering simulation.
  - **Automation Systems**: Developed Arduino program to record resistances from thermistors and calculate temperatures from these measurements. Wrote an interactive python visual interface that communicates with this arduino using the serial port.
  - **Quantum Ion Scattering Simulation**: Wrote a quantum simulation of ion scattering off a skewed gold surface. Solving time dependent schrodinger equation using energy states and operators. Implemented in Python using scipy and numpy.
  - **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.

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 using DJI drone protocol to automatically capture images of a crop. Also studied Near-IR imaging and NDVI to measure plant health.

Programming Skills

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