Max Hawkins

605-359-3831 | max.hawkins65@gmail.com | maxhawkins.info

Education

The University of Alabama – Tuscaloosa, Alabama   *Degree Expected: May 2022*
GPA: 4.0   BS in Electrical Engineering - Minors in Math and the Randall Research Scholars Program

Experience

GREEN BANK OBSERVATORY   *Electrical Engineering Intern, May 2019 - August 2019*
- Reduced radio astronomy data loss by up to 50% by excising radio interference at high time resolutions through machine learning semantic segmentation on data viewed in frequency space
- Utilized **Amazon Web Services** S3 to manage a >20 terabyte dataset and deployed the trained ML model using Sagemaker
- Created a multi-class semantic segmentation model to classify data as desired signal, unwanted signal, or fast radio bursts
- Created a data annotation and formatting pipeline from scratch for **TensorFlow/Keras**
- Gained experience with fourier transforms, signal processing, and FPGA programming

UA ECOCAR   *Autonomous Sub-Team – Driver Awareness Design Lead, September 2018 - Present*
- Created a customized deep learning object detection algorithm to determine driver awareness state using **TensorFlow**
- Experimented with stoplight and stop sign detection to create residential autonomy
- Gained experience with CAN communication and automotive radar sensor fusion

NATURALLY FUNDAMENTAL   *Creator, April 2018 - Present*

- Started a science education platform featuring interactive visualizations focusing on engineering. Created an online presence and UI environment using HTML, CSS, and D3.js. Wrote articles and graphs that have been featured on Y.Combinator News and Reddit

THE ORBITAL MECHANICS SPACE PODCAST   *Research Assistant, May 2016 – August 2016*
- Researched and edited space-related articles for a preeminent spaceflight podcast and helped create an audiobook for *Ignition! – An Informal History of Liquid Rocket Propellants*

Skills

- Proficient in **Python**, and Fortran
- Experience with **AWS**, MATLAB, Java, TensorFlow, Keras, Scikit-Learn, C#, and Microsoft SQL
- Web Development using JavaScript, HTML, and CSS
- Data Analysis and Visualization – **D3.JS** and Pandas
- Writing and Editing

Relevant Projects and Awards

- Electric Longboard – Designed and built an 18650 li-ion power system from scratch for a DIY electric longboard deck.
- DIY Carputer - Currently creating a driving augmenter and car head unit replacement for my car. Object detection inference on a forward-facing camera to detect stop signs, lane-drifting, and obstacles, bluetooth music playback, and navigation.
- DIY Electronics – Constructed airplanes and a custom aerial video drone.
- Fall 2018, Spring 2019 Dean's List
- Eagle Scout and Former SD Boys State Governor