# Jacob C. Ruff

1220 Cherokee Dr.
Richardson, TX, 75080

(214) - 984 - 4237
jakeruff99@gmail.com

## Academics

**Texas A&M University,** *College Station, TX*
*Graduating: May 2022*
In progress, Bachelor of Science - Electrical Engineering, GPA 4.0
Minor in Computer Science

## Skills

**Proficient Programming with Significant Linux Experience** Matlab, Python, C/C++, Latex

## Employment

**Johns Hopkins Applied Physics Lab,** *Laurel Maryland* May 2020 - December 2020
*Digital Signal Processing Intern*
Adapted model of received vs transmitted radio symbol rate to linear splines for real time conversion
Improved Simulink model of a radio's carrier and code loops making it HDL synthesizable
Produced a tutorial for installing and compiling radio software

**Paragon Innovations,** *Richardson Texas* Sept 2017 - Dec 2017, Dec 2018
*Engineering Intern*
Verified circuit boards functionality and assured there was no electric shorting.
Purchased inventory based on project and individual engineers' needs
Assembled various prototype boards and products

**University of Texas at Dallas,** *Richardson, TX* June 2017 - August 2017
*High School Intern with the Science, Engineering and Education Center*
Led creation of instructional manuals for teaching kids how to program
Assisted in instructing a beginner's Python class.

## Activities

**Ultrasound Research,** *Texas A&M University* May 2021 - Present
*Researcher*
Producing speckle decorrelation curves to create 3D reconstructions from freehand ultrasound probe
Simulating speckle and phantoms using Field II in Matlab
Modeled decorrelation curves based off the phantom simulations done in Matlab

**HowdyHack Hackathon,** *College Station TX* Sept 2019
*Team Leader*
Produced a phone app that communicated with an Arduino over Bluetooth to control a circuit
Wrote Arduino C code that handled serial input communicated via Bluetooth

**Computer Science Competitions,** *College Station TX*
*Competitor*
Participated in TAMU Fall 2018 and Spring 2019 competitions
Participated in the North American Invitational Programming Competition
Competitions improved problem solving ability utilizing algorithmic design