

KEVIN HERMSTEIN

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EDUCATION

Columbia University

Ph.D. in Electrical Engineering

Expected May 2029

University of Maryland, College Park

B.S. in Electrical Engineering, cum laude - 3.96 GPA

○ *Tau Beta Pi Member* – Engineering honor society, only top 12.5% of Junior engineering class is eligible.

May 2023

EXPERIENCE

Software Engineer Intern at Raytheon AST

June – August 2023

- Developed stages of a preprocessing pipeline for a blind waveform identification ML model.
- Adapted algorithms in Python for filtering, mixing, and resampling to detect center frequency and baud rate of a signal given real valued samples.
- Wrote bash scripts to test the performance of the model and pipeline on over 9000 signal snapshots.

Undergraduate Research Assistant

August 2022 – August 2023

- Computational investigation into the prediction and quality of space charge dominated electron beams.
- Supported the Bright Beams Collective, a world-class research facility in beam and accelerator physics at the Institute for Research in Electronics and Applied Physics.
- Wrote Python scripts utilizing Warp, a particle-in-cell package, to simulate high energy electron beams.
- *PI: Patrick O'Shea, Ph.D. Mentor: Liam Pocher, Ph.D Candidate*

Undergraduate Teaching Fellow

January 2022 – May 2023

- One of two students selected lead discussions twice a week to teach Unix and C programming concepts.
- Wrote questions for midterm and final examinations to evaluate students' knowledge of class concepts.
- Third semester holding this position.

Software Engineer Intern at Raytheon AST

June – August 2022

- Created a dynamic HTML web page to control RF switches from remote locations.
- Web page could toggle inputs, check for errors on the switches, display command history, and toggle settings of the Python backend.
- Hosted the webpage on a virtual machine configured to automatically start the web server on startup.
- Added support for cross polarity, special diversity signals to a software-based multi-threaded demodulation product in C++.

Software Engineer at Raytheon AST

June – August 2021

- Developed scripts in Python to streamline DevOps. Script interfaced with Npm, Docker and Github repositories, as well as Jenkins.
- Wrote MySQL scripts to initialize a MySQL database and handle the removal and addition of data
- Documented approach to MySQL database and functionality of scripts.

Software Engineer Intern at Raytheon AST

June – August 2020

- Documented a detailed approach to extract metadata and raw text from Office Suite and PDF files.
- Developed library in C++ to handle the extraction of metadata and raw text from Office Suite documents and PDF documents using a pointer to the file in memory and a length of data.
- Presented and demoed feature to multiple teams and department managers.

SKILLS

Technical and Other

- C/C++, Python, Bash, Git, HTML, Verilog, Unix, MATLAB, MS Office