

# James Mendel

jrm.mendel@gmail.com  
linkedin.com/in/james-mendel/  
jamesmendel.com  
(816) 588-4609



## EDUCATION

**Electrical Engineering, Bachelor of Science**  
**University of Kansas, Lawrence KS**  
Honors Student

**Expected May 2023**  
GPA: 3.86/4.00

## TECHNICAL SKILLS

Altium Designer   PSpice   SMT Soldering   PCB Bringup   C / C++   MATLAB   Python   Arduino   VBA   KiCAD

## PROFESSIONAL EXPERIENCE

**R&D Electrical Engineering Intern**  
**Medtronic, Jacksonville, FL**

Jun 2022 - Aug 2022  
*Full Time*

- Designed, laid out, manufactured, and assembled PCB to characterize performance of PDN simulation software and demonstrate its capability using Altium Designer
- Trained an audience of ~20 engineers on Altium Power Delivery Network simulation software
- Drove design improvement in battery system by collecting and analyzing data from Texas Instruments BMS ICs
- Designed and created drivers for STM32 microcontroller on PCBA to interface with I2C and analog components

**Manufacturing Engineering Intern**  
**Medtronic, Santa Rosa, CA** (Remote)

Jun 2021 - Aug 2021  
*Full Time*

- Automated calculation of a key business metric by creating VBA macros in Excel to extract and analyze thousands of data points and reduce labor by >95%
- Planned project using DMAIC + A3 problem solving method to more efficiently route a solution for the problem
- Documented the program to allow for future support, created installer package for ease in usability

**Electrical Engineering Technician**  
**Filtrionetics, Inc., Kansas City, MO**

May 2019 - Jan 2020  
*Full Time*

- Thoroughly tested batches of various RF filter technologies, including mini-monolithic, saw, and ceramic, to ensure they were within specification - ~45 filters/hr
- Followed testing procedure via Agilent spectrum analyzer and logged performance results for traceability
- Accelerated logging process by automating Excel spreadsheets using VBA macros, reducing entry time by 50%

## RESEARCH

**Undergraduate Research Assistant**

**Center for Remote Sensing of Ice Sheets, Lawrence, KS**

May 2022 - Present

- Characterizing RF performance of board-to-board connectors to validate use in radar systems @ 18-22GHz

**Radar Systems & Remote Sensing Lab, Lawrence, KS**

Mar 2022 - Jun 2022

- Implemented range doppler radar DSP in MATLAB to synthesize chirp signal, identify matched filter response, and introduce simulated point scatterers

## WORK EXPERIENCE

**Code Sensei (Supplementary Instructor)**  
**Code Ninjas, Leawood, KS**

Jan 2018 - May 2019  
*Part Time*

- Worked with groups of 10-20 children ages 7-14 to advance their knowledge of programming languages including Python, JavaScript, and Scratch

**Student Engineering Consultant**

Aug 2017 - Jan 2019

**Center for Advanced Professional Studies, Overland Park, KS**

*Student / Apprentice*

- Consulted with clients to turn their ideas into physical objects, by working in shop to design and fabricate parts using 3D printers, upright mills, CNC machines, and laser cutters; utilized Autodesk Fusion 360 and Eagle

## ACTIVITIES

- IEEE@KU**, Event Chair, Vice-President, Secretary, Member 2020 - Present
- HKN (Gamma Iota Chapter)**, Secretary, Member 2022 - Present
- Boy Scouts of America**, Earned the rank of Eagle, Webmaster 2011 - 2018