James Mendel

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EDUCATION

Electrical Engineering, Bachelor of Science   **Expected May 2023**
University of Kansas, Lawrence KS   GPA: 3.86
Honors Student

TECHNICAL SKILLS

Altium Designer	PSpice	SMT Soldering	C / C++	MATLAB	Python	Arduino	VBA	KiCAD	Autodesk Fusion 360

PROFESSIONAL EXPERIENCE

R&D Electrical Engineering Intern   Jun 2022 - Aug 2022
Medtronic, Jacksonville, FL   *Full Time*
- Trained an audience of ~20 engineers on Altium Power Delivery Network simulation software
- Designed, laid out, manufactured, and assembled PCB to characterize performance of PDN simulation software and demonstrate its capability using Altium Designer
- Designed and programmed STM32 microcontroller on PCBA to interface with I2C and analog components

Manufacturing Engineering Intern   Jun 2021 - Aug 2021
Medtronic, Santa Rosa, CA (Remote)   *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   May 2019 - Jan 2020
Filtronetics, Inc., Kansas City, MO   *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)   Jan 2018 - May 2019
Code Ninjas, Leawood, KS   *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