Nicholas Kantack

10125 Junction Dr. Apt 419 ● Annapolis Junction, MD 20701 ● 605-690-6811 ● nickkantack@gmail.com

Academics

University of Oklahoma
Bachelor of Science: Engineering Physics
Summa Cum Laude
Graduated May 2016
Cumulative GPA: 3.98

University of Virginia
Enrolled in Electrical Engineering Master's program
Expected graduation December 2020
Cumulative GPA: 3.70

Work Experience

Electronics Manufacturing Engineer July 2018 - Present
Johns Hopkins Applied Physics Laboratory
- Developed software to analyze large volumes of autonomously collected circuit measurements
- Maintained, support, and improve fabrication process for electronic spaceflight circuit board assemblies
- Created custom hardware and software infrastructure for automating electronic assembly and test

Electrical Engineer May 2016 - June 2018
IntriCon
- Managed manufacturing lines for and design communication and positioning coils for medical devices
- Designed, developed, and maintained production equipment, software, and automation
- Developed custom software for collecting, analyzing facility-wide production data with AI data monitoring

Undergraduate Researcher January 2014 – May 2016
University of Oklahoma
- Analyzed data and developed a model to characterize performance curves of solar devices
- Created software to integrate and automate laboratory measurement systems to characterize solar devices
- Modeled a glovebox environment for controlled-environment spectroscopy experiments

Proficiencies

Methodologies
- Software/Application Design
- Programming Physical Simulations
- Numerical Analysis
- Probability and Stochastic Methods
- Machine Learning and Artificial Intelligence
- Microcontroller programming
- Machine/Controller Design
- Circuit Design, Fabrication, Analysis
- Design of Experiments
- Statistical Process Control

Software Languages/Packages
- Javascript/HTML Web+Server Design
- Java
- MATLAB
- C/C++
- Visual Basic
- Android Mobile Apps
- AutoCAD
- LaTeX – markup language
- Minitab – statistical analysis
- Microsoft Office

Publications

"Room Temperature, Air Crystallized Perovskite film for High Performance Solar Cells." J. Mater. Chem. A (2016)

"Environmentally Friendly Plasma Treated PEDOT:PSS as Electrodes for ITO-free Perovskite Solar Cells" ACS Applied Materials & Interfaces (2017)