# Nicholas Kantack

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## Academics

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

## Work Experience

**Electrical Engineer** May 2016 – Current
***IntriCon Corporation***

- 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 (use of AutoCAD)

**Manufacturing Intern** May 2014 – August 2014
***3M***

- Worked on 14 different projects across four departments improving manufacturing processes
- Conducted time studies of manual packaging lines and presented several candidate automation schemes
- Applied multivariable calculus to create a field intensity map inside an irradiator that matched experiments

## Proficiencies

**Methodologies**

- Machine/Controller Design
- FPGA Microcontrollers
- Circuit Design, Fabrication, Analysis
- Software/Application Design
- Programming Physical Simulations
- Machine Learning and Artificial Intelligence
- Numerical Analysis
- Design of Experiments
- Statistical Process Control

**Software Languages/Packages**

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

## Publications

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

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