

G. Nik Hargenrader
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Objective **To gain admission to graduate school and perform research towards improved solar technology.**

Research Experience **Research Assistant**, Maldonado Group, University of Michigan *Aug 2013 – Present*

- Design custom test equipment for use in electrochemical research.
- Troubleshoot and understand custom Labview code.
- Observe lab safety procedures.
- Investigate possible methods for etching p-GaP.

Industrial Experience **Applications Engineer**, Promess Inc. *June 2011 – Aug 2013*

- Perform setup for electric ball screw presses on industrial machines.
- Write control program based on application and customer needs
- Repair circuit boards for industrial signal conditioner.
- Work with customers over the phone and on site.
- Represent company at Expo shows and on sales visits to potential customers
- Research and develop solutions for new applications as required including: hardware design, software development, testing, and validation
- Provide product recommendations to customers through analysis of their applications

Contract Engineer, Freescale Semiconductor *Aug 2008 - June 2011*

- Design hobby robot control board that interfaces with Freescale’s tower system
- Design mechanical brackets for hobby robot using AUTOCAD.
- Responsible for testing prototype design tool.
- Expand hardware capabilities to interface with many microcontrollers.

Contract Engineer, GNH Engineering (Owner-Operator) *Dec 2008 - June 2011*

- Design and prototype electronic products based on customer specs.
- Designed wireless base station and sensor boards for residential solar power monitor system.
- Quickly go from concept to product.
- Circuit and PCB design with ORCAD, and PCB Artist.
- Software design with Freescale’s Codewarrior.

Skills/Activities **Skills**

- Proficient in: Microsoft Office
- Proficient in: C, MATLAB, Codewarrior (Freescale IDE)
- Digital and Analog circuit design and testing
- Experience in: metal working, welding, fabrication, CAD drawings
- Knowledge of and experience with plant safety protocols
- Proficient with common electronics lab bench tools

Activities

- Run small electronics lab while working full time.
- While in college, maintained classes full time and worked part time.

Education**Lake Superior State University, Sault Ste. Marie, MI***Obtained: Aug 2008*

- Electrical Engineering (BS)
- Mathematics (Minor)

Related course work:

Digital Electronics • Analog Electronics • Computer Programming • Embedded Programming • Real World Problem Solving • Self Management • Team Leadership.