

# BENJAMIN GERBER

[bpgerbe@gmail.com](mailto:bpgerbe@gmail.com) • [www.benjamingerber.org](http://www.benjamingerber.org)

---

## SUMMARY

Determined worker with internship experience at successful companies who strives to learn about industry medical devices. Desires an internship at a medical device company to apply knowledge of design in the medical field.

---

## EDUCATION

**North Dakota State University**, Fargo, ND

*Bachelor of Science Electrical Engineering*

*Dec. 2018*

GPA: 3.505, Deans List (3 semesters)

### Relevant Coursework:

Signals & Systems	Applied Electromagnetics	Embedded Systems	Cardiovascular Engineering I & II
Digital Design	Senior Design I, II, III	Biomedical Engineering	Communication Circuits

---

## TECHNICAL SKILLS

<i>Hardware:</i>	RF Design, Digital & Analog Circuit Design, PCB Design, Filter Design
<i>Software:</i>	Altium Designer, Matlab, DesignSpark, Kicad, Arduino, Excel, Linux, Solidworks
<i>Programming:</i>	C, C++, Powershell, Bash, Assembly Language, TCL, Python, HTML, Java
<i>Electrical:</i>	Communication circuits, soldering, signal analysis, sensors, EOG, ECG, EMG,

---

## ENGINEERING PROJECTS

### Senior Design: REM Sleep Cycle Monitor - Senior Design

*2017-present*

- Designing circuit to capture REM cycles through EOG signals and relaying them over bluetooth
- Inventing a sensor headband with mounting for a 3D printed enclosure with PCB design
- Creating an android app to analyze sleep patterns and developing algorithms for future features

### Microfluidic Cell Printing Research – Undergraduate Research

*2017-present*

- Researching techniques and bioreactors to keep cell spheroids alive in a 3D enclosed space
- Working with team to design simulation of microfluidic flow to solve backflow and throughflow problems
- Developing metacognition process through regular presentations on self-created learning objectives

### Low Cost, High SNR DAC/Tube Amp Combo – Personal

*2018-present*

- Use knowledge of low noise grounding & EM techniques to develop low SNR amplifier
- Self taught use of vacuum tube valves in low-voltage starved applications

---

## INTERNSHIPS

**Graco Inc**, Anoka, Minnesota

*Electrical Engineer Intern*

*Summer 2017*

- Designed and prototyped a guided wave radar EM medium sensor leading to possible future patent
- Performed hardware test engineering on upcoming project to solve performance issues
- Proved troubleshooting skills in finding and solving bugs with sonar and RF sensors, and power

**HGST, A Western Digital Company**, Rochester, Minnesota

*System Integration Technology Lab Intern*

*Summer & Fall 2016*

- Applied knowledge of scripting to automate debugging processes saving over one thousand man-hours a year
- Exercised troubleshooting skill to repair systems, avoiding cost of repairs and increasing efficiency in team
- Led small team in testing of NVMe drives and educated team on procedures and tools of operation
- Educated myself about new topics in order to teach others and increase team knowledge

---

## ACTIVITIES

**Air Force Reserve Officer Training Corps**, Fargo, ND

*2014-2015*

**Arnold Air Society Member**, Fargo, ND

*2014-2015*

---

## REFERENCES AVAILABLE UPON REQUEST