**Jodie Whitney**

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**DESIGN ENGINEER**

* **Highly skilled design engineer**experienced in bringing electrical and mechanical devices from conception to completion, able to carry the project every step of the way. Areas worked include marine accessories, test equipment, optical sensors, motor control, military and aerospace applications.

**Expertise**

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| --- | --- |
| * Marine Device Design * Product R&D/Prototyping * Firmware Design & Testing * Electrical Design | * Verification & Validation Testing * 3D CAD Tools * Support of Manufacturing * IPC Certified Solderer |

**Engineering Experience**

Caltronics Design & Assembly  
**Design Engineer,** 1/2013 to 8/2015  
Hired as a design engineer to serve as an integral member of a team developing innovative contract assemblies. Handle new product concept development, design, testing and simulation modeling to support the manufacture of next-generation devices of differing applications in a fast-paced design environment.

***Project Highlights:***

* **Electronic Boat Accessories:**
  + Designed motor control driving up to 60A electric trolling motor
  + Wrote firmware that used logic level RS-232 for controller and power module communication
* **Color Sensing Test Instruments:** 
  + Electrical design using color sensor with I2C interface using Atmel microcontrollers
  + Mechanical design encapsulated in off the shelf box with specially fabricated, light diffusing plastic
  + Wrote windows application to control hand held device using C#
* **Reverse Engineering PCB**
  + Collaborated with customer to import Gerber files into Altium for the purpose of setting up their own Altium environment
* **Paint Mixer Control** 
  + Translated demo board and bread-boarded circuitry into a UL testable PCB
* **Robotic Targets for Military Use:**
  + Verified sample models matched BOMs and sorted out any discrepancies in source materials provided by previous vendor
* **Production Support:**
  + Wrote batch files to automate testing
  + Worked with Production Team on implementing work and test procedures

**Relevant Extracurricular Activity & Volunteering**

**3D Printing:**

Flashforge Creator Pro; fused filament fabrication

Currently designing a 3D printed line of jewelry to sell on Etsy for extra cash flow.

**Girl Develop It – Minneapolis: Lab Coordinator and Class Teacher’s Assistant**

GDI’s goal is to help women enter the web development field in a supportive environment. As Lab Coordinator, I set up time and place for ladies to get together and work on their projects. TA’s help students work through problems in class.

**Education**

Minnesota State University, Mankato  
**BSEC in Computer Engineering,** 5/2012

**Technology Tools**

**Technologies:** Altium, SolidWorks, Atmel Studio, Visual Studio 2015, MPLAB, GitHub, Arduino IDE, Simplify3D, MS Office, Trello

**Languages:** C/C++, C#, Javascript, HTML, CSS