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**Summary**

Driven engineer and scientist with a passion for building and learning. Demonstrated ability to create high quality software and firmware on almost any platform, system architecture, or operating system. The kind of person that learns to swim by jumping in the deep end. Creative and resourceful problem-solver that works well under pressure.

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**Job Experience****Bridge12 Technologies, Inc.** (Framingham, MA) May 2017 – June 2020**Software & Control Systems Engineer** (August 2017 – June 2020)

- Chiefly responsible for the control systems of assorted radiation technologies in the microwave/terahertz products division
- Designing from the ground up: writing firmware, embedded software, creating APIs, GUIs using Qt, client/server apps
- Writing algorithms and developing original software revolving around nuclear physics and wave motion
- Independently responsible for every stage of the software development lifecycle on every project I was assigned
- Projects include particle accelerators, gyrotrons, vacuum bakeout systems, and lab instrumentation
- Frequently utilized various microcontrollers, SoMs, FPGAs, and SBCs as well as various Linux distributions

**Research and Development Intern** (May – August 2017)

- Independently designed controls for a lab instrument, including microcontroller firmware, client and server applications
- Aided in hardware design and part selection, as well as debugging hardware issues during development

**Penn State - Department of Physics** (University Park, PA) January – May 2016**Teaching Assistant**

- Instructed sophomore-level physics curriculum and led weekly labs on electricity and magnetism
- Graded assignments, proctored exams, and assisted students in their learning through office hours

**Gannett Company, Inc.** (McLean, VA) May – August 2015**Data Entry Associate**

- Assisted with data consolidation and overhaul of the legal records database during divisional corporate entity split
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**Technical Skills****Development Tools & Languages**

- Highly experienced with C/C++, Python, Qt, HTML, CSS, Bash
- Proficient in MATLAB, LabView, JavaScript, Java, Visual Basic
- Git, Vivado, SolidWorks, KiCAD, Qt Creator, Adobe Design Suite

**Field Experience**

- Creating graphical software for medical professionals
- Strong familiarity with Linux and building kernels
- Device firmware, system APIs, mobile apps

**Certified Lean Six Sigma Black Belt**

- Earned in 2019 following the implementation of a new inventory management system at Bridge12 Technologies, Inc.
  - Guided process owners in metrics, product selection, and project management to minimize sunken costs
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**Education****The Pennsylvania State University** (University Park, PA) 2013 – Fall 2017

**Graduation:** Bachelor of Science degree in Physics with a focus in Computational Physics

**Notable Course Experiences:**

- Programming in C++, MATLAB
- Medically-applied nuclear physics
- Modeling fluid mechanics
- Engineering design
- Effective technical writing

**Tufts University** (Medford, MA) 2018 – Spring 2020

**Graduation:** Master of Science degree in Mechanical Engineering with focuses in Design, Dynamics, and Control

**Notable Course Experiences:**

- Machine learning in Python, C++
- Digital control of dynamic systems
- Customer-driven R&D
- Sustainable engineering
- Technical leadership