

# Robert G. Gambee

Portfolio: <https://rgambee.github.io>  
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## Professional Experience

**Formlabs:** 3D printing company in Somerville, MA 2015 to Present  
*Systems Integration Engineer*

### Responsibilities

- Prototype, test and integrate key printer systems
- Design and implement algorithms for production firmware
- Develop, document and maintain tools to enable other engineers to work more efficiently
- Facilitate communication between hardware and software teams
- Interview job applicants to assess their problem solving skills

### Projects

- Novel firmware architecture 2021 to Present
  - Independently developed firmware in Python for a fleet of prototypes
  - Advised architectural decisions for embedded and desktop software
- Dashboard for plotting live sensor data 2021
  - Independently developed over four days during company hackathon
  - Wrote backend in Go, wrote frontend in JavaScript, streamed data via WebSockets
- Laser pointing calibration for Form 3 and Form 3L 3D printers 2019 to 2020
  - Wrote factory software routines to calibrate thousands of printers
  - Rapidly deployed firmware fix for hardware issue that was blocking production line
  - Led effort to speed up automatic recalibration by a factor of five
  - Led validation testing to prove system meets accuracy goals
- Resin management for Form 3 and Form 3L 2018 to 2021
  - Implemented algorithm to maintain consistent resin level despite variable sensor readings
  - Overhauled resin tracking and dispense logic to improve customer experience
- STEM outreach volunteering 2022
  - Collaborated on lesson plan to introduce high schoolers to microcontrollers
  - Advised team of three students to build RFID reminder system during two day hackathon

## Skills and Coursework

### Programming Skills

- Python, C++, Go, Rust, Bash, SQL, JavaScript, HTML, CSS

### Continuing Education

- Google's Machine Learning Crash Course 2022
- fast.ai's Practical Deep Learning for Coders 2022

### Personal Projects

- Advent of Code 2018 to Present
- Titanic Survival Kaggle Competition 2022

## Education

### Harvey Mudd College, Claremont, CA

- Bachelor of Science in Engineering with High Distinction*, GPA: 3.8 2015
- Inducted into Tau Beta Pi, national engineering honor society 2014
  - Designed, built and tested a data logger for SpaceX rockets 2014 to 2015
  - Simulated dielectric properties of BaTiO<sub>3</sub> nanoparticles for Sandia National Laboratory 2013 to 2015
  - Simulated and tested gas permeability in nanocomposite polymer membranes 2014 to 2015