Jack Bott

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Education

MS Electrical Engineering Columbia University, New York, NY *May 2019*
GPA 3.4

BA Physics Bard College / BS Mechanical Engineering Columbia University *May 2014*
Dual Bachelor of Science and Bachelor of Arts Program
Bard College, Distinguished Scientist / The Fu Foundation School of Engineering and Applied Science
BA GPA 3.6 / BS GPA 3.4

The University of San Francisco, San Francisco, CA *May 2010*
Physics Major, 32 credits, University Scholar, GPA 3.7

Geographic Experience

Senegal, Uganda, India, and the US.

Science and Engineering Experience

The Earth Institute at Columbia University, New York, NY
Systems Engineer *June 2014 - Present*

As a lead technical engineer, currently designs, builds, and retrofits control hardware and software systems for rural solar mini-grids in developing countries. Recent projects in Senegal and Uganda. Engages with international technical partners to produce and iterate on hardware and software design parameters. Coordinates a team of software engineers to develop web-based smart-control apps that automatically regulate system state based on sensor data, meter data, customer consumption, and account balance. Focusing on a scalable, pay-as-you-go model with code bases in Python, C, C++, Go, HTML, and CSS for Linux micro-computers and embedded contollers. Technical specifications for circuitry design produced in CadSoft Eagle.

Columbia University, New York, NY
Senior Design *Academic Year 2013-2014*

Coordinated the design of a self-controlled autonomous rooftop gardening system using smart-controls that maintain a constant roof weight and irrigate to meet crop water demand. Several design reviews, prototyping, and testing were all completed in preparation for a final design expo. Hardware components were manufactured to match Creo Parametric drawings using a 3D printer, a laser cutter, and a three-axis CNC milling machine. Software for the smart-controls was written in Python and the Shell Command Language on a microcomputer running the Ångström Linux distribution.

Bard College, Annandale-On-Hudson, NY
Sustainability Intern *Summer 2011*

Constructed and managed the budget of a covered bike rack, organized and implemented a bicycle share program, and created a bicycle plan for Bard. Repaired over twenty abandoned bikes from junked parts. Worked independently on large projects while handling day to day tasks.

Technologies

CadSoft Eagle, PTC Creo, FreeCAD, Laser Cutting, Machining, 3D Printing
Python, C, C++, JavaScript, React, Assembly, HTML, CSS, LaTeX, Go
VirtualBox, Arduino, Linux, OSX, Windows