Andrew S. Abbott

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EDUCATION

The Pennsylvania State University – *Class of May, 2019*
- Double Major: Electrical Engineering and Computer Science
   Emphasis: Computer Engineering

Related Coursework
- Programming – Studied object oriented programming, functional programming, programming language concepts
- Data Structures and Algorithms – Studied stacks, queues, heaps, trees, linked lists, time complexity, solvability
- Operating Systems – Studied stack frames, parallelization, threading, paging, caching
- Communication Networks – Studied network protocol layers, SMTP protocol, packet analysis
- Computer Organization and Design – Implemented a single cycle computer pipeline in Verilog
- Electronic Circuit Design – Studied diodes, MOSFETs, BJTs, and fundamental circuit design
- E.E. Theory – Studied RF analysis, nanotechnology, continuous/discrete time linear systems analysis
- Design Process – Studied the engineering design lifecycle, project management, and technical communication

ENGINEERING EXPERIENCE

Cheetah Technologies (now Alpha Technologies) – *Engineering Intern*   **Green Tree, PA**
- Worked on design team for a new DOCSIS 3.0 supported communications system   Jun. 2017 – Aug. 2017
- Reverse engineered signal processing hardware from competitor   May 2014 – Sep. 2014
- Implemented and tested prototype

Behrend Amorphous Modeler – *Software Engineer Intern*   **Erie, PA**
- Developed C++ code for an annealing simulator   Jan. 2017 – Apr. 2017
- Met weekly sprint challenges to implement features
- Refactored existing code with updated libraries and toolchains

PROJECT PORTFOLIO AND SKILLS

- Skilled in C, C++, Python2/3, Verilog, Pascal, and Java with exposure to JavaScript, Rust, and Scheme
- Administrate a Linux server running VPN, BitTorrent, HTPC, IRC bouncer, web server, and chatbot software
- Designed, implemented, and launched a Markov-chain-based chat bot that generates comical human-like speech
- Experience with the ESP8266, PIC32, Teensy, Mbed, and Arduino microcontrollers
- Reengineered a Nintendo 64 console to run on batteries and a portable screen with an integrated controller
- Perform NAND memory manipulation on PS3 consoles and chip installations on a Xbox 360 consoles
- Hardware repair on headphones, phones, MP3 players, laptops, computer parts, and video game consoles

OTHER WORK EXPERIENCE

Briggs & Stratton – *Data Entry*   **Milwaukee, WI**
- Translated document database to a new format   Feb. 2016 – May 2016
- Worked exclusively in a team-oriented environment
- Designed and implemented a program in Pascal to automate data manipulation

Residential Computing Service and Support (ResCom) – *Student Technician*   **University Park, PA**
- Troubleshoot student wireless/wired internet connections and wireless routers   Aug. 2014 – Feb. 2015
- Troubleshoot computer software and functionality issues
- Serviced on-call technical problems and maintenance