

## Charles Rockett

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### OBJECTIVE:

I am a recent graduate with a Bachelor of Science in Electrical Engineering looking for an opportunity as an entry-level electrical engineer. Clearable, and able to obtain a secret clearance or higher.

### EDUCATION:

#### Bachelor of Science in Electrical Engineering – 3.5/4.0

Wright State University

Dayton, OH

12/14

### QUALIFICATIONS:

- FPGA configuration and test bench in VHDL using, Xilinx ISE and Vivado
- Designing 3-D models using AutoCAD and Solid Works
- Schematic capture using EAGLE, Logisim, LTSpice, and NI Multisim
- Simulation and model-based design with Matlab and Simulink
- Programming Telit/Telus C24/H24 G2 modems
- Designing citywide wireless networks using Ubiquity radios
- Embedded Systems programming using Code Warrior IDE for Freescale 68HC12 family microcontrollers and Arduino IDE for Arduino (Atmel ATmega328)
- Reverse engineering of computer programs using IDA Pro
- Proficient at Microsoft Office Suite, Open Office, Google Docs and Linux
- Programming in C/C++, Java, LaTeX, Matlab, Python, VHDL, x86

### RELEVANT COURSEWORK:

- Circuit Analysis
- Continuous Controls
- Diff Eq and Linear Algebra
- Digital Communication
- Digital Design
- Linear Systems and Signals

### EXPERIENCE:

#### Intern – Grid Sentry LLC

05/14 – 01/15

- Activate GSM/CDMA cellular modems using AT commands.
- Developed new testing software using Java, focusing on serial communication of hardware using SCPI. Decreasing product test time by 300%.
- Utilized a command line interface (CLI) to remotely retrieve sensor data and updated firmware of IOT devices that monitored power grid distribution systems and infrastructure.

#### Truth Imager – Wright State Research Institute

01/13 – 12/14

- Validation of computer tracking algorithms that utilized object recognition to track targets from video feeds.

#### Undergraduate Researcher – Air Force Research Laboratory (AFRL)

01/13 – 09/13

- Constructed an aerial surveillance drone capable of rapid deployment from kinetic launch systems.
- Programmed surveillance drone controller, ArduPilot, to perform autonomous flight using GPS and gyroscopic sensors.
- Designed the mechatronics of the Tube Launched Quad Rotor project.

**Psychological Operations Team Leader – U. S. Army Special Operations Command 05/07 – 05/10**

- Developed Target Audience Analysis after meeting with leaders of the indigenous population and formulated objectives and goals as needed by Joint Special Operations Task Force (JSOTF).
- Utilized research using third party data and personal collection skills to gain insight into the social psychology of the targeted audience to meet the objectives JSOTF.
- Supervised a team of two soldiers while deployed within an area the size of Georgia to accomplish JSOTF and host nation objectives.
- Prepared daily briefs to JSOTF Commander of Psychological Operation missions, outlining objectives in my area of responsibility.

**Financial Management Technician – U. S. Army, 82nd Airborne 05/03 – 05/07**

- Created a database to detect inaccuracies using Microsoft Access. Increased productivity by 600%.

**PROFESSIONAL MEMBERSHIPS:**

- Institute of Electrical and Electronic Engineers (IEEE) Signal Processing Member 01/12 – Present

**VOLUNTEER EXPERINCE:**

- Treasurer of Dayton Diode, a makerspace, in Dayton, OH 01/11 – 12/14
- Adviser to Dayton Microcontroller Association (DMA) Board 01/12 – 12/14
- Instructor at Dayton Diode: 3D printing, circuit board assembly

**AWARDS:**

- Army Commendation Medal(s):
  - *Meritorious service and dedication to duty and leadership enhancing the combat readiness of his team while in the 82<sup>nd</sup> Airborne Sustainment Brigade.*
  - *Meritorious service to duty, expertise, and attention to detail as 5<sup>th</sup> Psychological Operations Battalion. Team Leader during Operation Enduring Freedom, Philippines*
- Non Commissioned Officer Professional Development:
  - **Primary Leadership Development Course**
  - **Basic Non-Commissioned Officer Course**
- Armed Forces of the Philippines Military Commendation Medal:
  - *For professionalism and dedication to the 5<sup>th</sup> Civil Relations Group (Armed Forces of the Philippines) while serving in the 4<sup>th</sup> Psychological Operation Group*

**PUBLICATIONS:**

“ *Small Antenna Positioning System Design at Wright State University*”

<http://www.2015apsursi.org/Papers/ViewPapers.asp?PaperNum=5179>

**PROJECTS OF INTEREST:**

- Built a 3-D printer from scratch giving insight into mechatronics systems using the following skills, engineering principles, embedded systems programming and trouble shooting. Printed 3D objects from models created in SolidWorks and SketchUp.
- Built an antenna positioning system from concept to working prototype for Wright State University Sensors and Signals Exploitation Laboratory. The initial requirements for the system were given and achieved using engineering principles, mechanical and electrical calculations, embedded system programming, and SolidWorks CAD design. Documentation of the project utilized LaTeX.