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Hammondsville Ohio

RUSSELL W. RATCLIFFE

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WORK EXPERIENCE

Student Researcher   **Complex Engineered Systems Lab**   **Fall 2016 - Present**

- Working on system to analyze image data to provide real-time gym exercise feedback
- Using SciPy and NumPy to recognize exercises through vector analysis

Software Intern   **The J.M. Smucker Company**   **Summer 2016**

- Created novel solution to perform audits
- Reduced 30-hour tasks down to 20-minute tasks using python
- Presented solutions to upper management resulting in company-wide use
- Created application that helps simplify the onboarding process for new employees

EDUCATION

Akron, Ohio   **University of Akron**   **Fall 2014 – May 2018**

- B.S.E. in Computer Engineering with Minor in Applied Mathematics
- Honors College & Deans List
- Relevant coursework: Computer Science 1 & 2 (C++), Algorithms, Operating Systems, Data Structures, Circuits, Linear Algebra, Computer Architecture, Compilers, Embedded Systems, Cryptography, Machine Learning
- GPA 3.545

PROJECTS

Transmit (2016) JavaScript, Electron, Socket.IO
- Android and desktop application to transfer data with sound
- Uses an inaudible sound to pair devices, automatically spreads to connect a large group

Inter-pet (2016) Python, Flask, SQL
- Android application that gamifies personal health
- Automatically collects fitness, sleep, and nutrition data then stores data in 5th normal database
- Uses a custom RESTful API that provides algorithms for metric analysis

Eventify (2016) Python
- Web application that analyzes an image for events and adds the events to the user's google calendar
- Uses OCR to extract text and parses the text for dates

Dynamic Courseware (2016) Python, Flask, BeautifulSoup
- Web application that processes a lecture and creates a dynamic never ending study guide
- Provides a summary, interactive questions, and relevant videos

AWARDS

- **First Place Hyland Hackathon (2016):** First place out of 100 contestants
- **HackPSU Third Place Overall (2016):** Awarded 3rd prize for Transmit project out of 625 contestants
- **AngelHacks Prize Winner (2016):** Best Machine Learning Project & Largest Impact. Competition geared toward Jr/Sr devs
- **Hack4Equality Online Grand Finalist (2016):** Prize winner, global competition

CAMPUS LEADERSHIP

IEEE Student Chapter and Hakron
- Increased member count from 10 to 30
- Conducted programming workshops
- Secured venue sponsorship
- Led competitive team that placed first at hackathon

ADDITIONAL EXPERIENCE

- Four years volunteer experience at Red Cross
- Two years Honors Engineering Club
- One year retail experience at Kroger
- One year High School math tutor
- One year NASA Robotics Club

SKILLS

- Python
- Flask
- SQL
- Linux
- C, C#, C++
- ASP.NET
- Git
- Vim
- Java
- JavaScript
- Node.js
- HTML, CSS