Bryan Serrano

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Education

University of Illinois at Urbana-Champaign **May 2016**
Bachelor of Science in Engineering Physics *Cumulative GPA: 3.24/4.00*

Experience

Control Works **St. Charles, IL**
Control Engineering Intern *May 2015 - August 2015*

- Designed and built control panels for industrial machines, such as press brakes and conveyor belts.
- Observed and assisted in fixing and maintaining machinery in the field
- Maintained inventory and stock for a 6-employee company that filled 10+ large-scale projects at a time
- Developed familiarity with power tools, such as table saws and drills
- Read and understood circuit schematics and panel design to meet the needs of clients

Loomis Laboratory of Physics **Urbana, IL**
Research Assistant *February 2014 - November 2014*

- Designed experiments for small scale testing of radiation shielding using electric fields
- Worked in a group of 3 and consulted with several professors to determine the most effective methods of radiation detection
- Designed and built small signal amplifiers for radiation detection devices

Projects

Light Detection and Navigation Robot

- Led a small team to build a robot that uses a series of photo-resistors to detect light and navigates based on the input
- Programmed an Arduino to interpret signals from photo-resistors to send to various motors on robot

Markov Chain Generator

- Wrote a Python script that uses text files to generate sentences based on frequency of words used in original text
- Used Reddit's API Wrapper PRAW to collect text from user comments which in combination with the markov-chain generator can be used to generate reddit comments

Computer Automated Coffee Machine

- Reverse-Engineered a coffee machine to allow it to be interfaced with a Raspberry Pi to add more functionality to the coffee machine, such as allowing it to be accessible through ssh and remotely programmed
- Developed circuitry and wrote Python scripts to allow Raspberry Pi to send signals to start and stop the machine and to create timers and alarms for the coffee machine

Skills

- **Programming**: Python, C++, R, HTML/CSS, Haskell
- **Electronics**: Micro-controllers, Embedded Systems, Integrated Circuits, Logic Design
- **Operating Systems**: Unix/Linux, MS Windows
- **Other skills**: ArcGIS, Soldering, Adobe Photoshop, LaTeX, Microsoft Office