Aaron I. Livingston

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Professional Summary

- Recent Graduate of the University of California, Berkeley in Electrical Engineering and Computer Science.
- Member of the Cal AIAA NASA Sponsored Robo-Ops Competition Team.
- Proficiency in Java, C, Python, Ruby, C++, JavaScript, HTML, CSS, Matlab. Ability to learn new platforms quickly.
- Leadership and administrative experience including hiring and technical training.
- Experience with debugging and troubleshooting both hardware and software.
- Did I say I can CODE? ... Fast and efficient algorithms!

Education

B.S. Electrical Engineering and Computer Science (EECS) December 2014

University of California, Berkeley – College of Engineering

Selected Coursework: Algorithms | Machine Learning | Artificial Intelligence | Operating Systems Programming | Unix | Data Structures | Computer Security | Machine Structures | Structure and Interpretation of Computer Programs | Embedded Systems | Feedback Control Systems | Systems and Signals | Microelectronic Circuits | Multivariable Calculus | Discrete Math and Probability Theory

Projects

See videos: http://aaronlivingston.github.io

- **Robotic Hand:** 3-D Printed Robotic hand controlled by electromyography and voice recognition. Electromyographic signals are detected by an armband and transmitted via bluetooth to a Raspberry Pi. On the Raspberry Pi the signals are processed with a k-d nearest neighbor machine learning algorithm to classify a hand "gesture." This gesture is then sent to an Arduino which incorporates this signal with the output from a voice recognition shield to determine control of servos in the robotic hand via pulse width modulation.
- **Inverted Pendulum on a Cart:** Self-erecting inverted pendulum using feedback control with observer estimation. An inverted pendulum is a pendulum which has its center of mass above its pivot point. Whereas a normal pendulum is stable when hanging downwards, an inverted pendulum is inherently unstable, and must be actively balanced in order to remain upright.
- **Magnetic Levitation with Feedback Control:** A magnetic levitation device using electromagnets in conjunction with photo resistors in an analog circuit.

Experience

Software Engineer, Big.World October 2014 - Current

- Big.World is a startup created by Berkeley students to create professional reputations. This is intended to help solve the staffing problems experienced by tech companies. Studies have shown no correlation between resumes and actually productivity of employees. Big.World was created as an effort to create an indicator for how productive an employee would be.
- Implemented website backend in in Python on Django MVC framework. Designed and implemented user registration for both local and oath2 social log ins.
- Created content management system for client content and profiles.
- Implemented a unique user acquisition system specifically tailored to software engineers.

Lead Desktop Consultant, University of California, Berkeley February 2013 - January 2015

- The Lead position at Rescomp is part of a nationally recognized leadership program. I led a project team of 12 senior staff.
- As Lead I exercised a high degree of autonomy and independent decision making to provide daily administration and support for the university. Planned, prioritized, and executed projects. Projects included large software migrations for 2000+ staff members and deployments of more than 400 computers with differing technical and software requirements.
- As lead I conducted numerous interviews and hired over 20 Desktop team employees.
- Developed a new training course (TCP/IP, print server management, Active Directory, hardware, applications) for the Desktop team in order to provide consistency in an environment that sees new students every two to four years and to increase the teams technical abilities and efficiency.