# ALEXANDER BOLINSKY

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## EDUCATION

**Washington University in St. Louis** *2012 - present*
B.S. in Computer Science & Engineering

**Relevant Coursework**
Logic and Discrete Mathematics, Digital Logic and Computer Design (VHDL), Computer Science I and II (Java), Introductory Robotics, Algorithms and Data Structures, Undergraduate Research in ESE - Signal Processing, Robotics, BCI (LabVIEW & Matlab), Digital Systems Laboratory (Verilog), Object-Oriented Software Development Laboratory (C++), Systems Software (C), Computer Architecture, Operating Systems, Computer Systems Design, Machine Shop

**Involvement**
IEEE · Co-President & Treasurer of Student Branch (ieee.wustl.edu)
ASME · Member
City Faces · Day Leader & Tutor (www.stlcityfaces.com)
Men's Squash Team · Treasurer, Harrow Squash Player of the 2014 Men's National Team Championship

## ENGINEERING & RESEARCH EXPERIENCE

**Electrical & Systems Engineering Research** August 2014 - present
*Undergraduate Research* *St. Louis, MO*

· Developed a system enabling two robots, each with a pair of microphones, to autonomously identify and move toward a sound source. Designed Brain Computer Interface (BCI) algorithms from EEG signals and implemented the design in LabVIEW to control the movement of a robot.

**Digital Systems Laboratory** August 2014 - December 2014
*Student* *St. Louis, MO*

· Designed and implemented a ten band stereo audio equalizer in verilog and deployed the design on an FPGA. Components of the design include a Finite Impulse Response (FIR) filter for filtering the ten frequency bands, a Serial Peripheral Interface (SPI), the equalizer itself, and a LabVIEW application/GUI.

**Institute of Electronics & Electrical Engineers Student Branch** February 2014 - present
*Co-President & Treasurer* *St. Louis, MO*

· Designed and constructed a Segway that utilizes a 6 DOF IMU sensor, an Arduino, and filter and error algorithms for self balancing. Collaborating with several other active members on projects involving developing for the Oculus Rift, hardware and software design and construction, and 3D printing. Competed in the IEEExtreme 8.0 programming competition in October, and plan to compete in an IEEE robotics competition in the Spring semester.

**The University of Texas MD Anderson Cancer Center** June 2013 - August 2013
*Research Intern* *Houston, TX*

· Performed research analyzing end-of-life care and hospice care and wrote an extensive literature review.

**Dr. Hugh Taylor's Lab, Yale University School of Medicine** June 2011 - July 2012
*Research Intern* *New Haven, CT*

· Performed research and produced a professional paper, poster and presentation for the 2011 Science Research Program Student Lecture Series. A second summer's research culminated in a literature review and abstract.

## TECHNICAL STRENGTHS

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| **Languages** | Java, Verilog, C, C++, VHDL, Objective C, Javascript, LaTeX |
| **IDEs** | Eclipse, Visual Studio, Xilinx ISE, LabVIEW, MatLab, Eagle, Xcode, Arduino |
| **Tools** | SVN, Vim, Illustrator, Photoshop, Excel, Powerpoint |
| **Manufacturing** | 3D printing, circuit board design & fabrication, metalworking (lathe & mill, etc.) |
| **Additional** | Technical writing, formal poster design & presentations |