

# ERIC JOHNSON

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## EDUCATION

University of Illinois at Urbana-Champaign  
Bachelor of Science in Computer Engineering

Spring 2017

### Related Coursework

Algorithms  
Artificial Intelligence  
Computer Graphics  
Probability in Engineering

Data Structures  
Computer Architecture  
Robotics  
FPGA Boards

Real-Time Systems  
Operating Systems  
Signal Processing  
Linear Algebra

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## COMPUTER SKILLS

### Languages:

**Proficient:** C, C++, Java, Python, JavaScript, C#, HTML, CSS, x86 Assembly, SystemVerilog

**Familiar:** SQL, PHP, .NET, Ruby, AVR Assembly

**Software:** Git, SVN, MATLAB, Linux, Android Studio, Microsoft Office, Altera Quartus

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## WORK EXPERIENCE

### University of Illinois at Urbana-Champaign

Summer 2016

LAICE (Lower Atmosphere/Ionosphere Coupling Experiment) Research Assistant

- Created software with C# and .NET for testing satellite battery packs automatically
  - Tested satellite circuit boards using embedded software written in C
  - Developed and ran tests for verifying quality of satellite optics systems
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## PROJECTS

### Neural Net GUI

Fall 2017

I made a website for demonstrating simple neural networks using HTML, CSS, JavaScript, jQuery, Three.js, and WebGL. Users can completely configure the network, including how many layers there are and the neuron count in each layer.

### iRobotics Competition Robot

2015 - 2017

Along with a team of two other people, I developed the software for the MRDC competition robot. This included writing a C program for an Arduino, a C# program using .NET, and creating a serial communication protocol for XBee radios.

### Autonomous Robot

Fall 2016

Along with two other students, I developed a multi-threaded C++ program running on a Raspberry Pi to control an iRobot Create® 2 Robot to autonomously follow along a wall using sensors and scan the environment for specific images, using OpenCV.

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## LEADERSHIP

### iRobotics Controls Technical Lead

2016 - 2017

- Coordinated and taught 12 hrs of technical workshops for engineering students
- Taught engineering students how to program electronics for controlling robots
- Wrote base code for other teams to build from

### iRobotics Midwestern Robotics Design Competition Programming Captain

2015 - 2017

- Built a robot to complete various tasks in competition
- Led the programming sub-team of one of the MRDC teams
- Won 2nd place in the 28th annual Jerry Sanders Design Competition

### iRobotics Social Director

2016 - 2017

- Organized team building exercises for iRobotics teams
- Planned and carried out 10 social events to engage members' interests
- Co-hosted social events with students from multiple organizations