

# ERIC JOHNSON

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## EDUCATION

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

Spring 2017

### Related Coursework

Algorithms	Data Structures, OOP	Real-Time Systems
Artificial Intelligence	Computer Architecture	Operating Systems
Computer Graphics	Robotics	Signal Processing
Probability in Engineering	FPGA Boards	Linear Algebra

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## COMPUTER SKILLS

**Languages:** C, C++, Java, JavaScript, Python, C#, PHP, SQL, NoSQL, JSON, HTML, CSS, Ruby, AVR Assembly, x86 Assembly, SystemVerilog

**APIs:** jQuery, Express.js, .NET, Socket.io, Windows Forms, Angular, WPF, WebGL, OpenCV

**Tools:** Node.js, MongoDB(NoSQL), MySQL(RDBMS), Git, MATLAB, Visual Studio, Android Studio, Eclipse, Linux, Unity, SVN, Microsoft Office, Quartus

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## WORK EXPERIENCE

**University of Illinois at Urbana-Champaign (LAICE Satellite Research)**  
Research Assistant

Summer 2016  
Champaign, IL

Developed a C# program using .NET, with a Windows Forms UI to communicate with equipment such as power supplies and multimeters to automate satellite battery testing. 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 two other people, I developed the software for the MRDC competition robot. This included an Arduino C program, a C# program using .NET with a Windows Forms GUI, and a communication protocol for XBee radio modules.

### Autonomous Robot

Fall 2016

With two other students, I developed a multi-threaded C++ program running on a Raspberry Pi to control an iRobot Create® 2 Robot. It can autonomously follow along walls 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