**ERIC JOHNSON**

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**EDUCATION**

University of Illinois at Urbana-Champaign Spring 2017

Bachelor of Science in Computer Engineering

**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

**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, Angular, .NET, Socket.io, Windows Forms, WPF, WebGL, OpenCV

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

**WORK EXPERIENCE**

**University of Illinois at Urbana-Champaign (LAICE Satellite Research)** Summer 2016

Research Assistant 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.

**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.

**Real-Time Chat Web App** Winter 2018

I developed a chat app with a Node.js, Express.js, and MongoDB back-end, and an Angular front-end. The database stores messages and registered users. The client and server communicate using a RESTful API and WebSockets using Socket.io

**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 to autonomously follow along a wall using sensors and scan the environment for specific images, using OpenCV.

**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