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, .NET, Socket.io, Windows Forms, Angular.js, 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.

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.

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