# **ERIC JOHNSON**

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#### **EDUCATION**

University of Illinois at Urbana-Champaign Bachelor of Science in Computer Engineering Spring 2017

#### **Related Coursework**

AlgorithmsData StructuresReal-Time SystemsArtificial IntelligenceComputer ArchitectureOperating SystemsComputer GraphicsRoboticsSignal ProcessingProbability in EngineeringFPGA BoardsLinear Algebra

#### **COMPUTER SKILLS**

## Languages:

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

Familiar: SQL, PHP, Ruby, AVR Assembly

Software: Git, Subversion, MatLab, Android Studio, Altera Quartus

#### **WORK EXPERIENCE**

## University of Illinois at Urbana-Champaign

Summer 2016

LAICE (Lower Atmosphere/Ionosphere Coupling Experiment) Research Assistant

- Created software in C# for testing satellite battery packs automatically
  - Debugged satellite circuit boards and electronic components
  - Developed and ran tests for verifying quality of satellite optics systems

## **PROJECTS**

## iRobotics Competition Robot (http://irobotics.illinois.edu)

2015 - 2017

- Led the team responsible for programming the robot
- Designed a wireless communication protocol and GUI for controlling robots
- Programmed time sensitive software for reading rotary encoder values

#### Neural Net GUI

Fall 2017

- Created a website for demonstrating simple neural networks using JavaScript
- Created a 3D representation of neural network using WebGL and Three.js
- User can completely configure network including layer count and size

#### **Autonomous Robot**

Fall 2016

- Developed a control system for following walls using sensor feedback
- Enabled the robot to draw an outline of a room as it navigates
- Implemented image processing to scan environment for images

### **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