

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

COMPUTER SKILLS

Languages:

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

Familiar: SQL, PHP, Ruby, AVR Assembly

Software: Git, SVN, MATLAB, Linux, Android Studio, Microsoft Office, 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
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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
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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