

# Noah W. Johnson

GRADUATE RESEARCH ASSISTANT · TEACHING ASSISTANT · UNDERGRADUATE LAB COORDINATOR

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## Research Interests

Augmented and Virtual Reality · Wireless Edge Computing · Machine Learning · Embedded System Design

## Education

### GRADUATE

#### University of Rhode Island

MASTERS OF SCIENCE, ELECTRICAL ENGINEERING

Focus: Edge Computing, Augmented/Virtual Reality Networking

Kingston, RI

August 2018 - Present

### UNDERGRADUATE

#### University of Rhode Island

BACHELORS OF SCIENCE, COMPUTER ENGINEERING

Major GPA : 3.85/4.00

Kingston, RI

August 2014 - May 2018

## Honors & Awards

### GRADUATE

2018 **2nd Place**, HealthHacksRI 2018, for the project VR Panic Attack Management System

Kingston, RI

### UNDERGRADUATE

2016 - 18 **Dean's List**, University of Rhode Island

Kingston, RI

2018 **4th Place**, URI Capstone Spring Summit (out of 17 teams)

Kingston, RI

2017 **6th Place**, URI Capstone Fall Symposium (out of 17 teams)

Kingston, RI

## Professional Experience

### Smart Networking and Computing (SNeC) Lab

Kingston, RI

GRADUATE RESEARCH ASSISTANT, UNDERGRADUATE LAB COORDINATOR

May 2018 - Present

- Developing Machine Learning task partitioning test bench for testing load-balancing algorithms. Currently using Tensorflow.
- Investigating applications of Virtual/Augmented Reality within mental health treatment
- Conducting Survey of Augmented Reality within transportation industry, developing AR-assisted driver assistance mobile application

### Handheld Arbitrary Waveform Generator - AstroNova Inc.

Kingston, RI

EMBEDDED SYSTEMS ENGINEER

Aug. 2017 - Present

- Designed and implemented FPGA-based architecture using VHDL and Xilinx Vivado Tools.
- Wrote firmware to support control of waveform parameters using C and Vivado SDK.
- Assisted in writing PC based application for fine control of waveforms using C#.

### University of Rhode Island IT Services

Kingston, RI

IT HARDWARE SPECIALIST

Oct. 2016 - Present

- Serviced/optimized hardware and software daily for students/faculty. Honed communication and teamwork skills.

### VoltServer Inc.

East Greenwich, RI

PRODUCTION ENGINEERING INTERN

Mar. 2017 - Aug. 2017

- Designed and constructed production testing / validation equipment and software.
- Performed RMA work on high voltage power transmission boards. Honed soldering ability.

## Poster Sessions

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### GRADUATE

#### "Third-Eye" : Driver Assistance System

(URI)<sup>2</sup> Research Symposium

POSTER SESSION

September 2018

- Utilized experience with Tensorflow, Deep Learning, and Networking to implement Alexnet-based classifier and detector
- Trained model on German street sign database and deployed to Android application for proof of concept implementation.
- Presented work in University-wide innovation competition.

#### HealthHacksRI 2018

Kingston, RI

PRESENTATION AND DEMONSTRATION SESSION

September 2018

- Designed and implemented prototype Virtual Reality-based Panic Attack Management System.
- Presented our solution to independent board of industry professionals
- **Awarded 2nd place**

### UNDERGRADUATE

#### Spring Capstone Design Summit

Kingston, RI

PRESENTATION AND POSTER SESSION

May 2018

- Developed PCB, VHDL Design, and C-based high level system from scratch with minimal oversight.
- Presented 9 months of work and functional prototype to industry professionals.
- **Awarded 4th place of 17 teams**

## Teaching Experience

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### GRADUATE

#### ELE 202 • Digital Circuit Design Laboratory

Graduate Teaching Assistant

TOPICS INCLUDE: BOOLEAN LOGIC CIRCUITS, FINITE STATE MACHINES, CIRCUIT SIMULATION

Fall 2018 - Present

- Taught Sophomore-level course on basics of digital circuit design, assisted students with debugging circuit logic
- Reinforced best practices in circuit analysis, critical thinking, and problem solving

## Technical Skills

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<b>Data Science</b>	Python, Deep Learning using Tensorflow, Event driven simulation using C/C++/VHDL, MATLAB
<b>Embedded Systems</b>	2 years of FPGA logic design using VHDL, Programming of said architectures using C
<b>Linear Control</b>	Design/analysis of digital control systems using MATLAB and Simulink, Delta analysis of control systems
<b>Other</b>	Robust knowledge of most operating systems, Effective communicator, public speaker, project coordinator