

# Noah W. Johnson

GRADUATE RESEARCH ASSISTANT · TEACHING ASSISTANT · ENGINEER

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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

Kingston, RI

August 2018 - May 2020 (Expected)

**Focus:** Network-Aware Task Partitioning, Edge Computing, Augmented/Virtual Reality Networking

### UNDERGRADUATE

#### University of Rhode Island

BACHELORS OF SCIENCE, COMPUTER ENGINEERING

Kingston, RI

August 2014 - May 2018

**Major GPA : 3.85/4.00**

## 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

### OTHER

2014 **Eagle Scout**, Boy Scouts of America, Troop 27

Toledo, OH

## Professional Experience

### Navatek Ltd.

Kingston, RI

NAVAL ENGINEERING INTERN

May 2019 - Aug. 2019

- Designed and Implemented a framework for Augmented Reality Registration using Fiducials in C++
- Coordinated with team members to integrate Pose Estimation to achieve centimeter-level precision

### Smart Networking and Computing (SNeC) Lab

Kingston, RI

GRADUATE RESEARCH ASSISTANT, UNDERGRADUATE LAB COORDINATOR

May 2018 - Present

- Investigating Wireless Edge Computing for Machine Learning applications
- Developing system for Augmented Reality aided health management
- Developing Augmented Reality System for transportation applications

### Handheld Arbitrary Waveform Generator - AstroNova Inc.

Kingston, RI

EMBEDDED SYSTEMS ENGINEER

Aug. 2017 - May 2018

- 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#.

### 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.

#### VR Panic Attack Management System

HealthHacksRI 2018

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

#### WG800 : Portable Waveform Generator

Spring Capstone Design Summit

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**

## 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

#### ELE 339 • Electronics I Laboratory

Graduate Teaching Assistant

TOPICS INCLUDE: NONLINEAR CIRCUIT ELEMENTS, FREQUENCY ANALYSIS, CIRCUIT SIMULATION

Fall 2019 - Present

- Taught Junior-level course on transistor theory and design of amplifiers, filters, and other nonlinear circuits.

## Technical Skills

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#### Augmented Reality

Unity, Google ARCore, Deploying to Mobile Augmented Reality Systems

#### Edge Computing

Image compression and video streaming, Queueing system modeling and simulation

#### Embedded Systems

FPGA Design, ARM Processors, Socket Programming, CGI

#### Other

Robust knowledge of most operating systems, Effective communicator, public speaker, project coordinator