

## Education

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**Northeastern University** **Aug 2011 - May 2016**  
BSc in Computer Engineering 3.90 GPA

## Experience

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**Viking Controls** **Dec 2022 - Oct 2024**

Control Systems Tech

- Managed integration, startup, and commissioning of control systems
- Integration of RS232, RS485, TCP/IP, Bluetooth, and Zigbee protocols using logic analyzers
- Tested and troubleshoot analog 4-20mA and 0-10VDC sensors and line voltage equipment using digital multimeters and oscilloscopes
- Tested and programmed PLCs and HMIs for visualization of system state by end users
- Provided remote and on-site service calls and support to clients and end users
- Worked with system administrators to design and integrate equipment into network topologies

**Freelance Software Developer** **Oct 2021 - Dec 2022**

- Worked with distributed teams and investors to build and test JavaScript and Python apps
- Rapidly developed pull requests using CI/CD with AWS DevOps, Docker, and Github Pipelines
- Effectively balanced multiple projects at a time with transparency and excellent communication
- Improved accessibility and styling of web applications styled with HTML5 elements and CSS
- Optimized React frontends and NodeJS backend apps for improved user experience

**Promptworks** **Feb 2022 - Jul 2022**

Software Developer

- Developed REST API using Django Framework for an iPhone app in early stages of development
- Integrated several REST APIs, including an ID verification system and ledger services
- Integrated with SQL database using Django wrapper

**Raytheon Technologies** **May 2016 - Sep 2021**

Software Development Team

- Developed new radar features as specified by the US Air Force using an Agile framework
- Worked with systems engineering teams to develop radar scheduling, planning, tracking, and DSP algorithms in C and C++
- Worked with a distributed team to improve DSP algorithm efficiencies up to 30 percent
- Collaborated with product owners, software architects, and DevOps to ensure code accuracy

Remote Site Integration Team

- Tested radar system under strict deadlines with small team on remote site above Arctic Circle
- Analyzed software performance using MATLAB and Simulink
- Performed real-time bug fixes on live radar system while insuring product and personnel safety

Internal Research and Development Team

- Integrated modern C++ technologies into legacy codebase
- Ported over 6000 code files from IBM AIX to Red Hat Linux with a small, agile team of developers.
- Acquired and maintained secret clearance during time employed at Raytheon

## **Chris Hughes**

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### **Experience (cont.)**

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#### **iRobot**

**Jun 2015 - Dec 2015**

Intern (Research & Development)

- Worked with multidisciplinary team of engineers to develop technology to be fielded in 10+ years
- Designed and fabricated a tool which detected a virtual "fence" to bound movement of robots using wireless technologies, Raspberry Pi, and Altium
- Created Python GUI to aid mechanical team's vibration analysis using QT and Bluetooth
- Designed and programmed LED light ring to indicate "mood" of robot with different colors and patterns and minimized cost with efficient layout and part selection

#### **MC10 Inc.**

**Jun 2014 - Dec 2014**

Electrical Engineering Co-op

- Worked alongside the medical product team to produce wearable sensor patch for Parkinson's
- Designed a five channel charging system in Altium that passed FCC regulations
- Optimized and tested battery life, memory capacity, and accelerometer accuracy in ICs
- Implemented data compression of sensor inputs in C for use on embedded system
- Created a Python GUI to visualize sensor data using Bluetooth

#### **Northeastern University**

**Jan 2013 - Jul 2013**

Research Assistant

- Worked alongside graduate students and professors to develop novel, low profile EEG system
- Demonstrated capability of EEG by powering remote control car using brain waves
- Created miniaturized EEG prototypes with Arduino and Raspberry Pi that could fit under ballcap
- Investigated various electrodes and bonding agents to achieve best electrical connection
- Characterized sensor data using C++, Python, and LabVIEW