

Stephen Duke

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dukefromearth.com

OBJECTIVE

Creative software engineer & hardware guru driven to contribute to the productivity and culture of a diverse team, while deepening and sharpening my development skills.

SKILLS

- ❑ **Software:** C++, JavaScript, Node.js, Git, AWS, Web Sockets, IoT, Tensorflow, Three.js, HTML, R, Python, SQL, NoSQL, ROS
- ❑ **Hardware:** Arduino, Raspberry Pi, AT, ESP32, ARM, Steppers, Motors, LED, Lasers
- ❑ **Design:** SketchUp, Blender, Gazebo, GIMP
- ❑ **Fabrication:** 3D Printing, CNC, Welding, Carpentry

EXPERIENCE

FROM EARTH - 06/2019 - Present

Freelance Software Developer

Selected Work:

- ❑ Built and developed cross-platform research software for the psychology department of Stephen F. Austin State University that tracked user interaction to test saccadic eye movement under different levels of distraction - [Node.js](#) and [JavaScript](#).
- ❑ Developed a high-impact electronic device for enhanced board game play using [atmega328](#) in [C++](#) that used bit manipulation from accelerometer readings to create a true random number generator. - [patreon.com](#)
- ❑ Built and deployed a [Node.js](#) IoT server on [AWS](#) that used a [REST](#) architecture to connect a suite of devices that controlled an array of motors, relays and sensors.
- ❑ Built and developed the hardware and [C++](#) software for a motor control and feedback system in a drone prototype.
- ❑ Fabricated an interactive & modular automata structure to teach students about STEM. The structure contained an array of [arduino](#)'s, motors, LED's and pulleys - [youtube.com](#)

OFCOURSE.IO - 04/2020 - Present

Instructor - Human Computer Interaction

- ❑ Teach students to create a [full stack](#) environment that interacts with custom built hardware and sensors using [HTML](#), [JavaScript](#), [Node.js](#), and [Arduino](#).

PROJECTS

- ❑ 2nd Place in [AI](#) Mastermind Competition using a Genetic Algorithm -- written in [Lisp](#).
- ❑ Genetic Algorithm for generating cellular automata patterns that gravitate toward specified targets -- written in [Python](#) & [JavaScript](#).
- ❑ Contact tracing contract on the [Ethereum](#) network for tracking STI's -- written in [Solidity](#).
- ❑ Designed and built portable electrical and data connections for over 10000 sq ft office in 4 World Trade Center conforming to NYC electrical code.
- ❑ Move Different Exhibition - 8'x8' interactive & touch-sensitive [LED](#) structure - [Raspberry Pi](#) & [Python](#).

EDUCATION

Bachelor of Computer Science

CUNY - Hunter College

04/2016 - 12/2019

Robotics Nanodegree

Udacity

07/2020 - PRESENT

