

# Foster McLane

## Programmer and Amateur Cyber Security Consultant

### Contact

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(919) FOOSTER

**Website**

<https://fooster.io/>

### About

I am a computer enthusiast and enjoy almost everything to do with computers, from low-level logic circuits to high-level programming. I am especially interested in embedded programming, operation systems, program security, network security, and network protocols.

### Profiles

**GitHub**

[fkmclane](#)

### Work

**Clemson University**

2016-01-11 –

**UPIC Intern**

Under Dr. Stephen Moysey, I research teaching applications of geological sciences field techniques in a virtual reality video game. The game, titled Virtual Reality Field Experiences, will feature a trip to the Grand Canyon where the gamer will learn rock identification techniques and build the stratigraphic column of the canyon.

**Clemson University**

2015-01-27 – 2016-05-07

## Undergraduate Student Researcher

<http://people.clemson.edu/~yue6/>

Under Dr. Yue Wang, I researched quadrotor control algorithms and trust aware manufacturing in the Interdisciplinary Intelligence Research Lab, or I<sup>2</sup>R Lab.

## FoosterNET, LLC

2013-11-26 —

### Owner

<https://fooster.io/>

FoosterNET, LLC is a company I use for freelance work in computer programming, system administration, and amateur cyber security consulting. It additionally sanctions all other services I provide for money including server hosting.

## Volunteer

## FTC - Star Bots 6170

2016-09-13 —

### Mentor

After having three years of experience of participating in the FIRST Tech Challenge robotics competition, or FTC, including one year of which I was team captain and made it to the super regional competition, I mentor the nearby Easley team, Star Bots.

## CU Cyber

2015-08-27 —

### Secretary

<https://cucyber.net/>

CU Cyber is the cyber security club at Clemson University. We participate in cyber defense competitions and hold weekly seminars involving cyber security. I am the secretary of CU Cyber where I maintain club organization and preparation. I additionally help create many of the weekly seminars given.

## SC Robotics Education Foundation

2015-01-31 —

### Field Technical Advisor and Field Inspector

<http://scref.org/>

After three years of experience of participating in the FIRST Tech Challenge robotics competition, I volunteer to run the scrimmage hosted by the SC GSSM and am the main technical coordinator for the state competition.

## Clemson ACM

2014-09-21 —

### Webmaster

<https://www.cs.clemson.edu/acm/>

ACM, the Association for Computing Machinery, is the world's largest society for scientific and

educational computing. I am the webmaster of Clemson University's local chapter where I create and maintain their website.

## Gentoo Overlay - fkmclane

2013-05-26 —

Owner

<https://github.com/fkmclane/overlay>

I have a recognized overlay for my distribution of choice for my workstation, Gentoo. I maintain over 50 packages in this overlay that range from little X11 tools to the Unity Editor, from the game engine, for Linux to all of the Linux software associated with Plex. Additionally I have a few of my own tools that I wrote such as one to manage tty sessions intelligently without having a display manager.

## OpenShot

2014-05-01 — 2014-07-01

Packager

<http://openshot.org/>

OpenShot is a simple, powerful, and free open-source video editor for Linux with a focus on usability, flexibility, and style. I work on their team to package the editing library and program for multiple Linux distributions including Debian/Ubuntu, Arch Linux, and Gentoo Linux.

## Education

### Clemson University

2014-07-18 — 2018-05-01

 **Computer Science, with an interest in Education, Math, and Language**  
Bachelor of Science

#### Courses

- Discrete Structures
- Algorithms
- Computer Organization
- Software Engineering
- Operating Systems
- Network Programming
- Principles of Programming Languages
- Computer Security Principles
- Special Topics in Embedded Computing

### SC Governor's School for Science and Mathematics

2012-07-13 — 2014-05-31

## Courses

- Advanced Computer Science
- Digital Logic
- Modern Physics

## Awards

### Outstanding Research and Presentation

by SC Junior Academy of Science

Awarded 2014-04-05

Awards: 1st Oral Presentation - Computer Science, 1st Written Presentation - Computer Science. The awards included an invitation to the American Junior Academy of Science.

## Publications

### Trust-Based Mixed-Initiative Teleoperation of Mobile Robots

2016-07-06

Published by American Control Conference

Trust-Based Mixed-Initiative Teleoperation of Mobile Robots is a scheme for the bilateral teleoperation of mobile robotic systems using a quadrotor, ground robot, and a haptic feedback device. In the scheme, control is shared between human and autonomous controllers with the human controller having force feedback cues. Two-way trust models are calculated to dynamically scale each control input for optimal performance and reduced physical workload of the human operator. The results indicate that the proposed scheme improves task performance by 31% and reduces the operator workload by 23.9%.

### Vision-Based Control of a Quadrotor

2014-02-01

Published by SC GSSM

Vision-Based Control of a Quadrotor uses a quadrotor and its two mounted cameras to have the quadrotor perform basic analysis of its environment and make decisions based on it. It includes basic applications for following a marked path or object and an extensible interface for writing more complex autonomous logic.

## Skills

### Programming

- C

- C++
- C#
- Python
- JavaScript
- Java
- PHP

## Unix Administration

- Website Deployment
- Virtual Machines
- Networking
- General Services
- RedHat Enterprise Linux
- Ubuntu
- Arch Linux
- Gentoo Linux
- Debian
- FreeBSD

## Network Security

- Cisco
- pfSense
- Endian
- UniFi

## Virtualization

- libvirt
- oVirt
- Stateless Hypervisors
- PXE

## Software Development

- REST
- Robot Operating System
- GTK+

## Text Editing

- Neovim
- Vim
- Vi

## Game Development

- Unity
- Pyglet

## Web Development

- HTML5
- CSS3
- JavaScript
- PHP
- Python

## Documentation

- LaTeX
- Markdown
- VimWiki

## Computer Graphics

- Blender
- GIMP
- Inkscape

# Languages

### English

Native

### Spanish

Proficient

### French

Proficient

### Lojban

Learning

You can find a viewable version of this document at:

<https://file.fooster.io/fkmclane/resume.html>

You can find a JSON version of this document at:

<https://file.fooster.io/fkmclane/resume.json>