

Foster McLane

Programmer and Amateur Cyber Security Consultant

Contact

Email

fkmcclane@gmail.com

Phone

(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

[fkmcclane](#)

Work

Clemson University

January 2017 — Present

Cyber Security Intern

Under Clemson Computing and Information Technology, I analyze Clemson's computer network for potential threats, mitigate current threats, and prevent current threats from happening in the future.

Clemson University

January 2017 — Present

Virtual Reality Intern

Under Dr. Stephen Moysey, I work to bring virtual reality to the university in a variety of ways including setting up VR systems, coordinating generally available VR equipment for students and faculty, and creating demos for VR.

Clemson University

January 2016 — December 2016

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

January 2015 — May 2016

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 I²R Lab.

FoosterNET, LLC

November 2013 — Present

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

September 2016 — Present

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

August 2015 — Present

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

January 2015 — Present

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

September 2014 — Present

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

May 2013 — Present

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

May 2014 — July 2014

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

July 2014 — May 2018


 **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
- Foundations of Computer Science
- Distributed and Cluster Computing

SC Governor's School for Science and Mathematics

July 2012 – May 2014

 **Computer Science**
High School

Courses

- Advanced Computer Science
- Digital Logic
- Modern Physics

Publications

Trust-Based Mixed-Initiative Teleoperation of Mobile Robots

July 2016

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

February 2014

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.

Awards

Outstanding Research and Presentation

by SC Junior Academy of Science

Awarded April 2014

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

Skills

Programming

Master

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

Unix Administration

Master

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

Network Security

Master

- Cisco

- pfSense
- Endian
- UniFi

Virtualization

Master

- libvirt
- oVirt
- Stateless Hypervisors
- PXE

Software Development

Master

- REST
- Robot Operating System
- GTK+

Text Editing

Master

- Neovim
- Vim
- Vi

Game Development

Proficient

- Unity 3D
- Pyglet

Web Development

Proficient

- HTML5
- CSS3
- JavaScript
- Semantic UI
- PHP
- Python
- Django

Documentation

Proficient

- LaTeX
- Markdown

- VimWiki

Computer Graphics

Beginner

- Blender
- GIMP
- Inkscape

Languages

English

Native

Spanish

Proficient

French

Proficient

Lojban

Learning

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

You can find a JSON version of this document at:

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