

# ALAN CAO

## STUDENT AND SYSTEMS ENGINEER

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I am a systems engineer specializing in cybersecurity, systems, and full-stack web development. I have experience in a multitude of computer programming languages, from C to Python. I am also proficient in many in-demand frameworks and technologies. I hope to incorporate all of my experiences in cybersecurity and low-level systems engineering with my expertise of development to build innovative products. With a growing interest in data science and machine learning, I'm a passionate learner and visionary. I will never turn my back on developing ground-breaking technologies.

## Skills

### SOFTWARE DEVELOPMENT

HTML / CSS / Javascript  
Python  
Git  
C/C++  
Rust  
Linux Kernel Development  
Ruby  
Bash / Shell Scripting  
Intel x86 Assembly

### INFORMATION TECHNOLOGY

Cybersecurity & Penetration Testing  
Linux Operating System  
Systems Administration  
TCP/IP and Networking

### OTHER TECHNICAL SKILLS

Domain Management  
Technical Speaking & Presentation  
Hardware and Electronics  
Modern Cryptography

## Education

Francis Lewis High School  
Class of 2019

The Cooper Union - Albert Nerken School of Engineering  
Digital Logic for the Aspiring Inventor Electrical Engineering 2017

Attended Cooper Union's Summer STEM Program for one semester of an undergraduate course on Digital Logic and electrical engineering fundamentals.

## Employment

### Nuapps

Software Engineer

Francis Lewis H.S  
Sep 2017 to Current

- Built cutting-edge apps for Virtual Enterprise firm
- Implemented modern technologies and systems for efficient development

### Francis Lewis H.S

I.T. Internship

Francis Lewis H.S  
Jun 2016 to Current

- Providing technical assistance in Francis Lewis High School
- Troubleshooting and diagnosing software/hardware issues on Windows 7 / Mac OS X
- Gaining knowledge of systems/server administration and the TCP/IP architecture
- Assisting JROTC Battalion with website administration

## Projects

### FLHS Patriot Battalion

Mar 2017 to Current

- Built web technologies for the Francis Lewis Patriot Battalion
- Implemented modern-day and real-time Content Management Systems for efficient administration

### dedsplit

Nov 2016 to Current

- Built community-supported and open-sourced penetration testing and security auditing framework for security professionals and ethical hackers during 24-hour hackathon

## Activities

turingmachines (<http://turingmachines.cf>) · Developer

Current

- Established an open-sourced and collaborative technology lab for building innovative technologies and products
- Built low-level and web-based products to help meet technical needs (e.g. a privacy-focused alternative Linux-based distribution)

Junior Reserve Officer Training Corp · Cadet Staff Sergeant

Current

- Built leadership skills through classroom-based curriculum, as well as outside community service and volunteerism
- Helped aid JROTC Battalion in technical issues and events requiring technical help

## Volunteering

Intrusive · Founder  
New York, NY

Current

- Founded a nonprofit organization dedicated to providing cybersecurity education and awareness to high school students through hackathons
- Developed open-sourced hardware projects focused on digital rights and privacy

lewHacks() · Director / Founder  
Francis Lewis H.S

Current

- Lead and organized a 200+ participant student-run hackathon in Francis Lewis High School
- Built web technologies that assisted the progression of the hackathons