

# Alessandro Ferrari

Bilingual (Italian/American) 11th Grade student at La Scuola d'Italia Guglielmo Marconi, US permanent resident living in NYC. Member of the Rocky Linux Testing team.

300e 74th St apt 18F

New York, NY 10021

(646) 821-5621

[alessandro.ferrari.2004@gmail.com](mailto:alessandro.ferrari.2004@gmail.com)

<https://github.com/Ferryistaken>

## EXPERIENCE

I have no real work experience in the field, but I've been coding consistently for 3 years and I am experienced in a lot of CS fields, backend, system programming, IoT, microcontrollers, bare metal programming, DataBases, Linux/System Administration, Frontend Development with ReactJS, scripting in bash and python, CDN and SSGs(Netlify and Jekyll).

## EDUCATION/COURSES

### La Scuola d'Italia Guglielmo Marconi, New York — HS Diploma

May 2019 - June 2022

I am currently undergoing a High School Diploma at La Scuola d'Italia Guglielmo Marconi, an Italian-American High School in New York. I am doing 3 courses at the same time: American High School Diploma, Italian High School Diploma (*Maturità*) and International Baccalaureate Diploma. I am going to graduate in June 2022 and do Computer Science as my major. My current GPA (as of April 2021) is **4.14**. I also passed the first phase of the "*Gare di Archimede*", the equivalent of the AMC competition in Italy.

### Columbia University, New York — Summer Course

August 2020

I have been accepted to the summer course for High School students at Columbia University "*Introduction to AI: Search Algorithms*". In this course we studied and coded iterative deepening and Breadth-first search algorithms in python. This is taken from the student evaluation letter: "*Alessandro was able to complete not only all of the required written questions correctly, but also the bonus ones too. He was also able to produce well-structured and organized object-oriented code to solve the extremely challenging programming component. This is very impressive when taking into account the difficulty of the programming portion. His submission was among the best in the entire class. It was a pleasure having him be a part of the class. Based on the work I saw from Alessandro, I definitely think he is capable of excelling in this field of study. I am confident that he would excel at a top-tier college like Columbia*". In the same summer I was also accepted at a similar summer course offered by **University of California, Berkeley**.

This summer (2021) I have been accepted at another course at Columbia called "*Big Data, Machine Learning, and their Real World Applications*".

## SKILLS

I am proficient in:

- Backend Development
- System Programming
- Application Development
- Web Development
- Embedded Programming
- Version Control
- Unix-Like System Administration (Both Server and Desktop)
- Using Modern Debugging Tools
- DevOps (CI/CD)
- Virtualization/Containerization
- Penetration Testing

I have experience in:

- Frontend Development
- Application Testing
- Restful API Development and Testing

## TOOLS

I use this software/tools every day:

- Git and Github (Github Actions)
- VSCode
- Vim/NeoVim
- Netlify
- Ubuntu ARM (For Server)
- Arch Linux (For Desktop)
- Docker
- QEMU
- Mattermost (For dev-team)

## BEST PROJECTS

Almost all my projects are hosted on my Github (<https://github.com/Ferryistaken>). Here are some of the best ones:

### CHIP8-rs — A Chip8 emulator written in rust

Link: <https://github.com/Ferryistaken/CHIP8-rs>

This is an emulator of the CHIP8 virtual machine written from the ground up in the Rust programming language. It has 3 stars and a fork on Github. It's under Github Actions, Github's own CI/CD platform.

### operating\_system — An x86\_64 operating system written in rust

Link: [https://github.com/Ferryistaken/operating\\_system](https://github.com/Ferryistaken/operating_system)

This is an operating system for the x86\_64 specification written in rust. It boots and prints text to the screen, using the VGA Text Buffer. Also under Github Actions.

### My Blog — My personal blog hosted on netlify

Link: <https://github.com/Ferryistaken/blog> Live site: <https://ferry.tk>

A blog that I started 2 years ago to track my progress and share my knowledge. It's under CI/CD using netlify and github. I built it using jekyll with a theme that I modified. I also wrote custom jekyll templates to suit my needs.

### CoDrone Driver — A jupyter notebook to fly drones

Link: <https://github.com/Ferryistaken/coDrone>

A jupyter notebook made to fly a drone. I forked the official library and changed because it was too slow for what I was doing. I managed to cut the wait times by as much as 2 seconds without affecting performance or usability.

### Automatic Plant Grower — An IoT Plant Growing System

An automatic system to grow a plant built on the esp32 and esp8266 platform. The system guaranteed automatic watering(using a pump) and automatic lighting(using a grow light) to the plant. It was built using FreeRTOS. All sensor readings were exported to a prometheus on my homelab, and the data was displayed using InfluxDB and Grafana.

### Rocky Linux — A Linux distro to take the place of CentOS

Link: <https://rockylinux.org/>

I am involved in the development of Rocky Linux, a distro created to take the place of CentOS, made by the creator of CentOS.

## AWARDS

### First Minecraft Server on Rocky Linux

Winner of the competition for the first Minecraft Server on Rocky Linux:

<https://forums.rockylinux.org/badges/105/first-minecraft-server-on-rocky-linux>

### First Place in the RomeCup robotics competition in 2015, Second place in 2014

I was part of the winning team "Pixel" at the 2015 RomeCup, where we built and coded a robot made to follow a track and surpass obstacles:

<https://www.mondodigitale.org/it/media/agenzie/romecup-2015-premiati-in-campidoglio-i-vincitori>

communication)

- BugZilla
- Discourse

I have experience and have extensively used these toolsets:

- Cargo and Rustc (For Rust)
- Arduino Framework
- Insomnia for Rest API Testing
- Npm and Yarn for ReactJS
- QMK
- mySQL DB
- Microsoft and Google Office Suite
- Github Actions
- WASM
- FreeRTOS

## LANGUAGES

I am proficient in these languages:

- Rust
- Python 2 & 3 with Jupyter
- Bash, Dash and Zsh
- C/C++

I have experience in these languages:

- Javascript (for Reactjs and WASM)
- Typescript (for Reactjs and WASM)
- Java
- R

I am also quick and willing to learn new toolsets and languages, so learning new tools wouldn't be a problem.

## PROJECTS I WORKED ON:

Onefetch, Rocky Linux, Alacritty, RustScan.