

# Ella Rose

Software Developer  
Consultant  
Independent Researcher



27 years old



Enfield, NH, USA



[erose1337.github.io/aboutme](https://erose1337.github.io/aboutme)



[python\\_pride@protonmail.com](mailto:python_pride@protonmail.com)

## About me

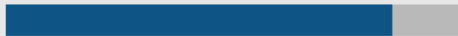
An auto-didact and an expeditious learner, I am passionate about researching and working with technology. I am a top user on the cryptography stackexchange site, with over 100 answers and over 100,000 people reached.

## Skills

Python



Cryptography



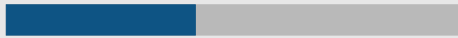
Networking



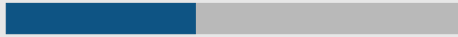
Mathematics



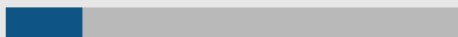
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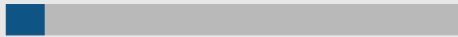
Github



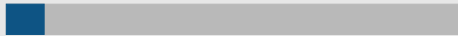
Machine Learning



HDL



Electronics



(\*)[The skill scale is from 0 (Fundamental Awareness) to 6 (Expert).]

## Interests

I love algorithm design and information theory. I have interests in cryptography, mathematics, networking, computer science, digital signal processing, and hardware development. I like working with and solving hard problems. I approach software with a secure-by-default mentality.

## Education

|            |  |                 |
|------------|--|-----------------|
| 2015-Today | Independent Researcher<br>Focus on Cryptographic algorithm design and analysis | Paso Robles, CA |
| 2003-2007  | High school<br>Specializing in computers and electronics.                      | Paso Robles, CA |

## Experience

|            |  |                 |
|------------|--|-----------------|
| 2013-Today | Software Developer<br>Developer of an application framework for python | Paso Robles, CA |
|------------|--|-----------------|

## Prior Work

### Pride

I am the author an application framework for python that facilitates the development of fully featured applications for a minimum amount of code. I have developed apis for working with audio, gui, sockets/networking, database, and cryptography/security. One of my goals is to develop my own desktop environment and an app store built around it.

### Cryptography

I have developed a novel trapdoor function and a public key cryptosystem built around it, as well as a fast authenticated-encryption-with-associated-data scheme. Additionally, my crypto package offers tools for cryptanalysis of symmetric algorithms.

### Mathematics

I have familiarity and experience with the following topics: Number Theory, Abstract Algebra, Linear Algebra, Statistics, Combinatorics. I acquired my understanding of these subjects by working with them in relation to cryptography, in addition to reading about them.

## Preferences

### Operating Systems

I am comfortable with both Windows and Linux based operating systems.

### Languages

I am a native english speaker with basic proficiency in spanish.

### Relocation/Remote Work

I am willing to relocate and/or work remotely

### Development Environment

I typically work with notepad++, though I recently started to work with vscode.