

# Mackenn Bross

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## EDUCATION

Candidate for B.S.E. in Computer Science,  
Minors in Data Science and History

**University of Pennsylvania**

📅 August 2017 – May 2021

📍 Philadelphia, PA

3.17 GPA

**Highlighted Courses:**

Scalable and Cloud Computing

Marketing/Social Systems on the Internet

Software Design/Engineering

Automata, Computability, and Complexity

Data Structures and Algorithms

Linear Algebra

Computer Architecture

Graduate of Magnet Program for Math and Science,  
AP Capstone Program

**Morris Hills High School**

📅 Sept. 2013 – June 2017

📍 Rockaway, NJ

4.00 GPA

## WORK AND EXPERIENCE

Software Engineering Intern

**Candid™**

📅 June 2019 – August 2019

📍 New York, NY

- Built internal tools and automated processes for lab employees using Retool with SQL queries and JavaScript.
- Created Django REST API endpoints and interfaced with external tools such as Salesforce to support the CRM team, using Python and the Django web framework.
- Completed user stories of various types as a member of the engineering backend team.

Lifeguard, Counselor, Boating Instructor

**Glen Wild Lake Swim Camp**

📅 June 2015 – August 2018

📍 Bloomingdale, NJ

- Planned/supervised activities and worked with 100+ campers aged 3-17, actively engaging with all campers and performing emergency first aid.
- Focused on teaching boating safety and sailing skills and techniques.

Co-Founder

**Computers 4 Kidz**

📅 August 2015 – July 2018

📍 Butler, NJ

- Co-founded the non-profit, setup Linux Mint on refurbished computers, and performed on-site installation of computers in homes of under-privileged students.
- Computers 4 Kidz is in the process of expanding its program to help students in other low-income areas.

## AWARDS

- Best Auto/Transport Hack by ACV Auctions (PennApps XX)
- Tom Newmann Scholar

## PROJECTS

Game Designer and Programmer  
**'College Simulator' Game (Ongoing)**

📅 September 2018 – Present

- Using C# and the Unity environment to create user interface for 2D rogue-like game.
- Working directly with the art team to implement custom assets for the project.
- Under development by the Game Research and Development (UPGRADE) club.

Full Stack Developer

**'farmaC' App and Website**

📅 February 2019 – May 2019

- Used JavaScript and CSS to create website.
- Used Java to write Android application.
- Interfaced with MongoDB using RESTful API.
- Completed for Software Design/Engineering final project.

Backend Developer and MapReduce  
Programmer

**'notebook' Social Media Platform**

📅 November 2018 – December 2018

- Used JavaScript with jQuery to write web backend.
- Used Java and Hadoop MapReduce to interface with Amazon AWS and compute friend recommendations for users using the adsorption algorithm.
- Completed for Scalable and Cloud Computing final project.

## SKILLS

**Languages:**

Java, Python, JavaScript, HTML

C#, C, CSS

OCaml



**Software and Tools:**

Git

Unix command line

Processing/P5.js

Hadoop MapReduce

PostgreSQL

Retool

Django

Amazon AWS

Node.js

Docker

Unity

Arduino

LaTeX

Android Studio

**Other Interests:**

Small Lake Sailing, Fencing, Chess, Vexillology