

# Declan Kutscher

Computer Science at the University of Pittsburgh

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## EDUCATION

### University of Pittsburgh, Pittsburgh, PA — *Bachelor's Computer Science*

AUGUST 2021 - APRIL 2024

Activities: Pitt Computer Science Club, Student Panther Club

Pitt SCI CS MS+BS April 2025

### Conard High School, West Hartford, CT — *High School Diploma*

SEPTEMBER 2017 - JUNE 2021

GPA: 3.9

Activities: Boy's Soccer (Fr., So., Jr., Sr.), Boy's Outdoor Track & Field (So., Sr.)

## PROJECTS

### Multiple Cipher Interface — *Java, Python*

This is a collection of programs I wrote in Python and Java for encrypting and decrypting messages with a multitude of different ciphers.

Has a multitude of different ciphers including Caesar, Affine, Vigenere, and Public Key (RSA)

All of these ciphers can encrypt and decrypt without the need for key input from the user. The decryption uses a brute force dictionary attack to find a key for Caesar, Affine and Vigenere.

### Picture Manipulator— *Java*

This program manipulates a photo's individual pixels. Pixels in this program are objects stored in 2D arrays. The Pixel object contains the Red, Green, and Blue color attributes so they're correctly displayed in a Java Swing GUI. Methods included:

ZeroBlue, OnlyBlue, OnlyRed, OnlyGreen NegateColor, GrayScale

Mirror(Left to right, top to bottom, and diagonal) RemoveWater, EdgeDetection

## SKILLS

Python

Java

HTML5/CSS

JavaScript

## LANGUAGES

English

## Courses

Data Structures and Algorithms  
Discrete Structures for CS  
Computer Organization and Assembly Lang  
Calculus 2  
AP Calc AB  
AP CS A

### A\* Path Finding Visualizer — *Python*

- Visualizes the A\* search algorithm
- Uses Tkinter and Pygame
- Can add obstacles
- Uses heuristic

### Portfolio Website - *JavaScript*

- JAMstack website
- Uses React.js, HTML5 and, CSS
- Hosted on Netlify/Gatsby or Azure cloud