

# Johnathan Bressette

Address

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## #Skills

Languages		GUI Libraries	Source Control	Data Management
C	Python	SFML(C++)	Git	MySQL
C++	Java	OpenGL(C)	Github	Pandas (Python)

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## #Projects

### 2D Color Puzzle (<https://github.com/Bressette/2D-Color-Puzzle>)

↳ 2D puzzle game to create a sorted gradient of colors from a scrambled grid by moving columns and rows

↳ Made using C and 2D graphics in OpenGL

↳ Colors are interpolated from randomly selected base colors at each corner to generate a color grid

↳ The user presses a key to scramble a gradient, clicks on an initial square, then they can use arrow keys to move the grid

### Traveling Salesman Problem Solver (<https://github.com/Bressette/SFML-TSP>)

↳ Program that displays a 5-node complete graph and computes the minimum cost Hamiltonian circuit

↳ Made using C++ and graphics in SFML

↳ Uses dynamic programming to solve the traveling salesman problem in  $O(2^n * n^2)$

### Crash Database (<https://github.com/Bressette/crashDatabaseProject>)

↳ Creation of MySQL database that holds data from crashes in Vermont in 2016

↳ Database is used to generate statistics using SQL queries on the database

↳ Data from a CSV file is parsed and sanitized using the Pandas library in Python, generating a CSV for each table

↳ Data is imported into the database using SQL queries

### Sorting Algorithms (<https://github.com/Bressette/sortingAlgorithms>)

↳ Implemented common sorting algorithms from scratch in C

↳ Sorts integer arrays using bubble sort, quick sort, merge sort, insertion sort, heap sort, and insertion sort

### Airline Priority List (<https://github.com/Bressette/airlinePriorityQueue>)

↳ Creates a sorted priority list of passengers on a flight and prints the priority list

↳ Reads from text file using C and computes a priority number based on passenger data included in the text file

↳ Passengers are sorted into a priority queue using heap sort based on each passenger's priority number

### Console Calculator (<https://github.com/Bressette/stackCalculator>)

↳ Simple single-digit calculator written in C that takes in user input from the console and computes the result

↳ Reads the character passed in and stores the value in a stack, computing results if the character is an operator

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## #Education

**Florida Polytechnic University** / B.S. in Computer Science (3.94 GPA)

August 2018 – May 2021: Lakeland, FL