Cole Morrison

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# Skills

**Programming:** Python, PHP, C#, JavaScript, HTML, CSS, Java

**Libraries and Frameworks:** .NET Core, Pygame, Selenium WebDriver

**Databases:** SQL, Microsoft SQL Server Management, DB Browser; Proficient in Normalizing Database Schema to 4NF

**APIs:** MapBox API

# Projects

1. Portfolio Website [Cole Morrison | Software Engineering Portfolio](http://colemorrison.net/)
   * Tech Stack: HTML, CSS, Vanilla JavaScript, PHP
   * Applied Skills: Responsive Design, Cross-browser Compatibility, UI/UX Design
   * Description: Developed a responsive Portfolio Website that dynamically adjusts its layout to accommodate different screen sizes. The website consists of five pages - Home, Resume, Projects, MyWiki (blog), and Contact. It provides an interactive and visually appealing experience and is hosted on Amazon AWS (Amazon Azara).
2. Traceroute Project
   * Tech Stack: Python, HTML, JavaScript, CSS, MapBox API, Scapy library, Flask, GeoJSON format
   * Applied Skills: Traceroute Functionality, API Integration, Geographical Data Handling
   * Description: The Traceroute Visualizer is a web tool that allows users to enter a website address or IP address and see a visual representation of the network path it takes. It displays the involved routers and their connections. Users can hover over the elements to gather more information about the routers and IP addresses. The visualizer also presents the delay in milliseconds (ms) at each step, providing insights into network efficiency.
3. Ticket Management Website
   * Tech Stack: C# .NET Core, Microsoft SQL Server, Bootstrap
   * Applied Skills: Database Design, Database Normalization (4NF), CRUD, Database Management
   * Description: The Ticket Management Website is a project designed for efficient ticket management. It allows students to submit and view their tickets, while workers have additional privileges to create, claim, and edit tickets. Managers can create and edit user accounts and manage tickets.
4. Ant Simulator (Work-in-Progress)
   * Tech Stack: Python, Pygame
   * Applied Skills: QuadTree Data Structure Implementation, Object-Oriented Programming (OOP)
   * Description: The 2D Ant Simulator aims to simulate the behavior of an ant colony in a two-dimensional environment. The project focuses on realistic movement patterns and behaviors, including the ants' ability to leave chemical trails to guide others toward food sources. It incorporates a custom QuadTree data structure for optimized collision detection and improved performance. The project follows object-oriented programming principles for modular and extensible code.
5. Small Projects
   * Tech Stack: Python, Java, Selenium WebDriver
   * Applied Skills: Object-Oriented Programming (OOP)
   * Description:
     + Youtube Free Views: Developed a Python script using Selenium WebDriver to simulate interactions with YouTube, artificially increasing view counts.
     + Instagram Bio Changer: Created a Python script using Selenium WebDriver to automate the login process to my Instagram account. The script dynamically updates my bio to display the username of the most recent follower.
     + CSGO Name/Pic Changer: Developed a Java project that periodically updates my Steam username and profile picture. It changes my Steam name to reflect the current time and sets my profile picture to an image of an analog clock.

# Experience

* **Grounds Crew, Georgia Cumberland Academy**
  + August 2018 to May 2020
  + Responsibilities: Maintained school grounds by mowing, watering, planting flowers and trees, and other assigned tasks.
* **Academic Tutor, Georgia Cumberland Academy**
  + August 2020 to May 2021
  + Responsibilities: Assisted students with homework and studying for tests.
* **Warehouse Worker, Amazon**
  + Dates: May 2021 to August 2021
  + Responsibilities: Packaged items.
* **Food Runner/Busser, Cantina Louie**
  + May 2022 to August 2022
  + Responsibilities: Delivered food to guests and cleaned tables.
* **Pool Monitor, Vesta**
  + May 2023 to present
  + Responsibilities: Checked-in guests and maintained cleanliness of the pool deck.

# Education

* **Bachelor of Science in Information Technology, Southern Adventist University**
  + Anticipated graduation: December 2024
  + Status: Junior
* **High school diploma, Georgia Cumberland Academy**
  + Graduated: May 2021
  + College Prep Diploma with honors
  + GCA Scholars
  + Played Saxophone in school band