

## Education

Temple University, College of Science & Technology – Philadelphia, PA

Bachelor of Science, Computer Science.

*Anticipated Graduation, 2022*

## Skills

- **Programming Languages:** C, C++, Java, Python, JavaScript, HTML/ CSS.
- **Frameworks:** React, Angular, Ionic 5, OpenGL, OpenCV, C++ Boost.
- **Operating Systems:** Linux, Microsoft Windows, Mac OS X.
- **Methodologies:** Agile, DevOps, Scrum.
- **Tools:** Git, Travis CI, Atlassian, Coveralls.
- **Relevant Courses:** Data Structures and Algorithms, Low Level Programming.

## Work Experience

**GoWith – Jerusalem, Israel**

*Software Developer Intern*

*May 2020 – Present*

- Worked in a group of three to develop motion analysis and wait time algorithms.
- Migrated codebase from Ionic 3 to Ionic 5. Assisted current developers with making the change.
- Integrated Google Maps and Directions API into app and used data to assist wait time algorithms.
- Worked with Metropolitan Washington Airports Authority to acquire flight data from Washington-based airports for use within the app.

**IATSE Local 52 – Philadelphia, PA**

*Lighting Technician/ Programmer*

*September 2017 – August 2019*

- Worked on a team ranging from four to twenty other lighting technicians to set-up and operate lighting equipment in television and film productions.
- Worked with technical equipment ranging in value of \$1000 to over \$100,000.
- Programmed consoles and created automated color change systems prior to events.

## Volunteer Experience

**Mitzvah Circle Foundation**

*~2010 - Present*

- Work in teams of four to sort through donated clothes/ footwear into relevant categories.
- Helped facilitate the packing of parcels for individual homes and what components to include.
- Created promotional videos to help acquire more donors and funding.
- Worked on the organization of inventory during a move between facilities.

## Projects

**Trajectory intercept System**

*[https://github.com/ColinHarker/Trajectory\\_Intercept\\_System](https://github.com/ColinHarker/Trajectory_Intercept_System)*

- Using an Arduino, OpenCV and C++, created a system to track moving projectile and intercept it with a nerf bullet.
- Tracking data from OpenCV is inputted into an algorithm to calculate future trajectory.
- Predicted point in space is converted into data that is sent to an Arduino, which then aims and fires a nerf turret at the predicted point.

**Solar System Simulator**

*[https://github.com/ColinHarker/Solar\\_System\\_Simulator](https://github.com/ColinHarker/Solar_System_Simulator)*

- A C++ visualizer of the orbits of each planet within our solar system. Uses the SFML library.
- To calculate attraction and motion, Newtons law of universal gravitation and vector velocity was used to provide accurate mathematical data.
- Real world measurements of planet mass and distance from the sun used to simulate proper orbital patterns.

## Open-Source Contributions

**TaoJSON**

- Provided unit test cases to improve overall code coverage.
- Worked on sorting out errors in config files.