

# Jack O'Brien

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github.com/JackOBrien21

## Education

### College of the Holy Cross

*B.A. in Mathematics and Computer Science, GPA: 3.57; cum laude,*

**Honors:** Dean's List (Fall 2019, Fall 2020, Spring/Fall 2022, and Spring 2023),  
Pi Mu Epsilon Mathematics Honor Society

**Worcester, MA**

*Graduation: May 2023*

## Skills and Relevant Coursework

**Programming Languages:** Java, Python, C#, SQL, HTML, CSS, MATLAB

**Technologies and Frameworks:** ReactJS, PyTorch, NumPy, Pandas, Django, MySQL, Git

**Mathematics Coursework:** Single and Multi-variable Calculus, Linear Algebra, Numerical Analysis, Probability Theory, Mathematical Models

**Computer Science Coursework:** Data Structures, Analysis of Algorithms, Computer Systems and Organization, Artificial Intelligence, Computer Networking, Databases

## Work Experience

### ○ Nassau County Board of Elections

**Mineola, NY**

Information Technology

*Jun 2022 - Present*

- Supported the IT director, installed, configured, and maintained various hardware and software, and performed regular back-ups.
- Designed, tested, tabulated, and verified ballots for elections held in Nassau County with over 1 million voters.
- Utilized Microsoft Access to manage an extensive database of registered voters, developing and executing complex SQL scripts to analyze and identify various trends and patterns.

### ○ Department of Mathematics and Computer Science

**College of the Holy Cross, Worcester, MA**

Teaching Assistant and Grader

*Sep 2021 - May 2023*

- Aid Professor in fielding questions and respond to students with various inquiries during lab, grade weekly assignments.
- Conduct office hours for general questions and preparation for exams for the following classes: Intro to Programming (Java), Data Structures (C++), and Computer Systems and Organization.

### ○ Boy Scouts of America

**Onteora Scout Reservation, Livingston Manor, NY**

Assistant Program Director and C.I.T. Director

*Dec 2020 - Aug 2021*

- Assisted in leading a program staff of 50+ members to provide Scouts the most enjoyable and memorable experience possible.
- Developed, implemented, and managed a program schedule for 1500+ participants (adult and youth).
- Developed a Counselor-in-Training program for aspiring staff members and provided them with the necessary knowledge to staff at Onteora Scout Reservation.

Assistant Program Director

*Dec 2019 - Aug 2020*

- Adapted a full summer program to a remote version on Zoom and assisted in leading a program staff of 50+ members.

## Software Projects

### ○ Search and Sorting Algorithm Visualizers

[github.com/JackOBrien21/visualizer-project](https://github.com/JackOBrien21/visualizer-project)

Applications that visualize common search and sorting algorithms created using ReactJS, HTML, and CSS. The visualizers are hosted on Firebase and can be found at [jackobriendevwebsite.web.app/projects](https://jackobriendevwebsite.web.app/projects).

### ○ Personal Notes Application

[github.com/JackOBrien21/djangoNoteProject](https://github.com/JackOBrien21/djangoNoteProject)

Notes application with login system with the ability to create, view, add new notes, and update existing ones. This application was created with Django (Python), HTML, and CSS.

## Achievements and Awards

### ○ Eagle Scout with Palms

**Theodore Roosevelt Council**

Boy Scouts of America

*December 2015*

Eagle Scout Project: designed, constructed, and installed a handicapped-accessible vegetable garden bed for an AHRC group home housing 10+ persons with mental/physical disabilities.