

# Johnny Ngo

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**Bachelor of Science in Computer Science GPA: 3.7/4.0**

December 2022

*University of Central Florida, Orlando, FL*

## SKILLS

Languages: C, Java, JavaScript, HTML/CSS, SQL

Frameworks and Libraries: React.js, Express.js, Node.js, D3.js, Jest.js

Operating Systems: Linux(Ubuntu 18 and 20), Windows 10, MacOS

Tools: Git, Jira, Expo, Figma, MongoDB

Relevant Coursework: Operating Systems(Linux), Process Object-Oriented Software(UML), Secure Software Development Assurance, Concepts of Parallel and Distributed Processing, Database Systems (SQL), Artificial Intelligence (Python)

## TECHNICAL PROJECTS

Algorithm Viewer

<https://algorithmviewer.com/>

- Improved computer science students' comprehension and retention of important concepts by developing an interactive, step-by-step data structures and algorithms visual simulation application with **D3.js** and **React.js**.
- Optimized the algorithm visualizer's usability by implementing interactive functionalities, resulting in an intuitive and user-friendly experience.
- Achieved a significant 50% improvement in runtime performance for visual loading pages by migrating the legacy code base from Unity to D3.js, resulting in enhanced efficiency and faster loading time.
- Ensured consistent server stability during deployment by implementing robust unit tests using **Jest.js**.

Sun Bay Hospitality Platform

<https://github.com/jxngo/Sunbay-Hospitality-Platform.git>

- Facilitated the overall hospitality guests experience by developing a web and mobile application using MERN(MongoDB, Express.js, React.js, Node.js) stack, enabling convenient access to guest check in/out, and ordering services.
- Implemented **CRUD** with **RESTful API** endpoints, utilizing **Node.js**, **Express.js**, and **SQL** for seamless data retrieval and manipulating.
- Mitigated risk of unauthorized access and safeguard user security by integrating **Bcrypt** for password hashing.
- Created an Android mobile user interface for guest ordering utilizing **React.js** and **Expo**.
- Devised **MySQL** database using **MongoDB** and **ER(Entity Relationship Diagram)** database modeling.

Concurrent and Sequential Logarithmic Algorithm Research

- Led a designated research team consisting of 5 undergraduates to conduct research on concurrent and sequential development by delegating tasks, conducting regular standups, scheduling sprints, and estimating task durations.
- Improved large dataset sorting performances by utilizing **Java** and its multithreaded framework, JUC(Fork/Join) and subclass RA(Recursive Action).

## WORK EXPERIENCES

**Instructional Tutor**

March 2022 – Present

*Orange County Public School, Orlando, FL*

- Facilitate the development of students' fundamental understanding of core mathematical concepts.
- Create proficiency evaluations to gauge students' mastery utilizing mathematical tools with the aim of augmenting their mathematical expertise.
- Improved the school's algebra test scores, resulting in the school being ranked number one in Orange County.

**Administrative Assistant**

August 2021 – Present

*Clear One Sports, Orlando, FL*

- Administered scheduling of staff and coaches for lessons, court reservations, and sporting events.
- Delivered exceptional customer service by addressing general inquiries and resolving conflicts.

## AWARDS

**First Prize, Senior Design Showcase**

December 2022

*University of Central Florida, Orlando, FL*

- Awarded 1<sup>st</sup> in a showcase competition among UCF Fall 2022 Senior Design computer science projects.
- Presented Algorithm Viewer at Senior Design Semi-Finalist Showcase to industry judges.