

# ZAIN KHAN

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## EDUCATION

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**University of California, San Diego**

*Sep 2019 - June 2023*

Sophomore, Bachelors of Science in Computer Science and Mathematics

## RELEVANT COURSEWORK

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CSE 12: Data Structures & Object-Oriented Design

CSE 20: Discrete Mathematics

CSE 15L: Software Tools & Techniques Lab

CSE 100: Advanced Data Structures

CSE 30: Computer Organization Systems

CSE 105: Theory of Computation

CSE 21: Mathematics for Algorithms & Systems

MATH 109: Mathematical Reasoning

## EXPERIENCE

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**Triton Software Engineering**

*Oct 2020 - Present*

*Software Developer*

- Triton Software Engineering is a group of **60+ students**, designing and developing software pro-bono for social good
- As a Software Developer, I work with a team of **8 other developers and designers** on a project to make a Supply Chain tool for a San Diego food bank to become more cost efficient

**Juni Learning**

*Feb 2020 - Present*

*Computer Science Instructor*

- Tutor high school students Computer Science concepts in Java, and Python
- Teach a wide range of core topics including recursion, algorithms, OOP, and graphics

## PROJECTS

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**Supply Chain Simulator**

*Oct 2020 - Present*

- Currently working on a team of 8 to create a Supply Chain tool to help a San Diego food bank make more cost efficient purchases on food and produce
- The goal is to forecast food availability and need for the food bank to easily estimate how much food there is, how long it will last, and how much more to purchase
- The project is using **React, JavaScript, MongoDB**, and a number of other back end tools

**Domain Name System (DNS) Block List Database**

*Oct 2020 - Nov 2020*

- Implemented a hash table-based database that would contains DNS names of websites to block
- Users could load in a list of DNS names they'd like to block to the database, and make queries for different DNS names they encounter
- The program would inform the user whether their DNS name is in the blocked database, and allow the user to add a new DNS name to the block database

**Sorting Algorithm Visualizer**

*June 2020 - Aug 2020*

- Created a web application using React, Node.js, and JavaScript to visualize sorting algorithms
- Able to visualize Merge Sort, Insertion Sort, Bubble Sort, and Selection Sort
- **Project URL:** [zainnk902.github.io/SortingVisualizer/](https://zainnk902.github.io/SortingVisualizer/)

## LANGUAGES AND TOOLS

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**Languages**

Java, Python, JavaScript, CSS, HTML

**Tools**

Bash Scripting, Vim, Unix, React, Git, GitHub, GDB