

Mayukh Das

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Experience

Infinite Options

San Jose, CA

Front-End Software Engineer Internship

January 2021 - August 2021

- Learned the fundamentals of React JS while working on a live grocery shopping website. Worked alongside multiple teams to build full-stack projects.
- **(Project #1) Nitya-Ayurveda:** An interactive website that markets services from an ayurvedic practitioner.
 - Constructed an Appointment Scheduler (using React-calendar) and Service Page while working closely with the database manager to integrate endpoints in a Python-based backend.
- **(Project #2) Caption-Web:** An engaging party game that functions as a standalone mobile web application.
 - Lead programmer for the Front-End design of the web application. Heavily applied Context, Axios, Router, Component, etc.
 - Implemented UI/UX design, API integration, and worked with database managers to resolve integration and API conflicts.

Personal Projects

B Tree

San Jose State

Data Structures & Algorithms, CS146

March 2021

- Devised test cases and algorithmic implementation of a B-tree (in Java), a self-balancing generalization of the Binary Search Tree.
- Started development by first understanding and creating a 2-3 tree (run Insert, Search, & Delete in logarithmic time).

Job Scheduling System

San Jose State

Data Structures & Algorithms, CS146

April 2021

- Developed a Graph Data Structure to mimic the behavior of a job scheduler. Designed an algorithm for finding the longest path.
- Implemented Kruskal's algorithm for Directed Acyclic Graphs, BFS, and DFS for pathfinding and cycle detection.

Processor Behavioral Model

San Jose State

Computer Architecture, CS147

August 2021 - December 2021

- Developed DaVinci v1.0, a fully functional behavioral model of a minimal computer system integrating 256MB memory and 32-bit processor supporting the CS147DV ISA. Later improved DaVinci v1.0 to create a mixed behavioral and gate level model.
- Used Verilog to create modules and testbenches for a 32 bit ALU, a 32x32 dual read Register File, and a Control Unit with a corresponding State Machine.

CULater

San Jose State

Object Oriented Design, CS151

August 2021 - December 2021

- Created a Java Swing Application to help users find overlapping time blocks in their schedule. Implemented MVC design.
- Used TreeSet, Insertion Sort, and Timestamp API for Model development; and used Swing for view development.

Education

San Jose State University

Graduation: May 2024

B.S. Computer Science | College of Science | Cumulative GPA: 3.7

- Relevant Computer Science Coursework: Operating Systems (C/C++), Programming Paradigms (Scala), Data Structures and Algorithms (Java), Intro to Computer Systems (x86 Assembly), Object Oriented Design (Java), Architecture (Verilog)
- Relevant Math Coursework: Discrete Math, Linear Algebra, Applied Probability & Statistics

Skills & Interests

- Languages/technologies: Java, C/C++, Scala, Python, Verilog, MySQL, ReactJS, HTML, CSS, git/github, JUnit, Postman, Rest API, Agile, Jira.
- Organizations: Software & Computer Engineering Society (SCE), SJSU Competitive Programming