

Zaven Cook

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Education

Clemson University

B.S. Mechanical Engineering; Minor in Mathematical Sciences. GPA: 3.5

Clemson, SC

December 2022

Experience

EXP

San Francisco, CA

Mechanical Engineer I

July 2022 – Present

- Worked in EXP's Science and Tech division to design HVAC systems
- Calculated building heat and cooling loads in Trace 700 and IESVE
- Selected appropriate equipment based on calculated loads

Dennis Group Atlanta, GA

Mechanical Engineer I

August 2021 – June 2022

Mechanical Co-Op

August 2018 – June 2020

- Assisted in the design of various utility piping and mechanical systems of food and beverage production plants
- Created drawings of designs up to the construction level in Revit
- Coordinated with engineers of other disciplines to produce effective and timely designs
- Performed calculations and analysis to select appropriate equipment and determine structural loads
- Determined situations in which energy recovery systems could be implemented
- Responsible for managing 7-8 other co-ops as "Head Co-op"

Skills & Certifications

Technical Skills:

Software: Revit, Trace 700, Excel, some IESVE

Programming Languages: Python (including Pandas), MATLAB, some SQL

Certifications:

E.I.T (Engineering in Training)

Personal Projects

San Francisco Plum Finder

- Programmed a Python module that finds the closest plum tree to a given location in San Francisco
- Utilized Pandas to process San Francisco public tree data by adding missing values, removing obviously incorrect entries, and filtering to only include plum trees
- Designed an algorithm that uses SQL to query a database to determine the user's geolocation, approximate the closest tree using this geolocation, and then finally use Google Maps API to find the actual closest tree
- Created a separate SMS (text message) interface and web server to access the program anywhere in San Francisco

Oyster Mushroom Growing Environment

- Designed an enclosure with regulated heating element to maintain ideal growing environment for Oyster Mushrooms
- Calculated the heating load of the box in order to provide an adequately powered heating element
- Assembled the heating element with a thermostatic controller and incorporated them into the enclosure