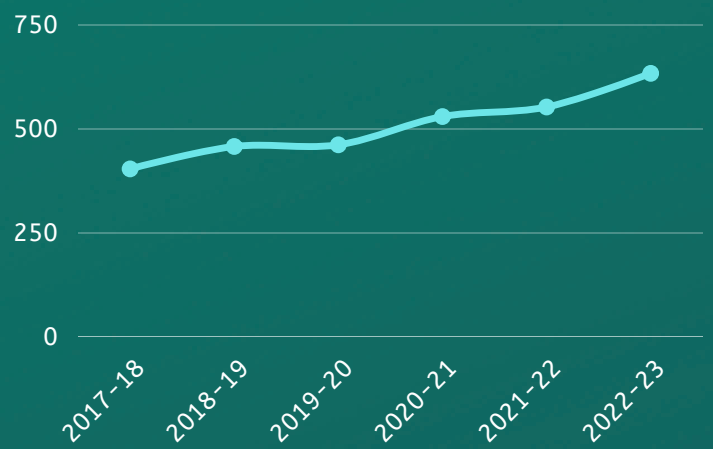# Investigating the Challenges in K-12 Computer Science Education in Hawaii

Mentee: Briana Lee
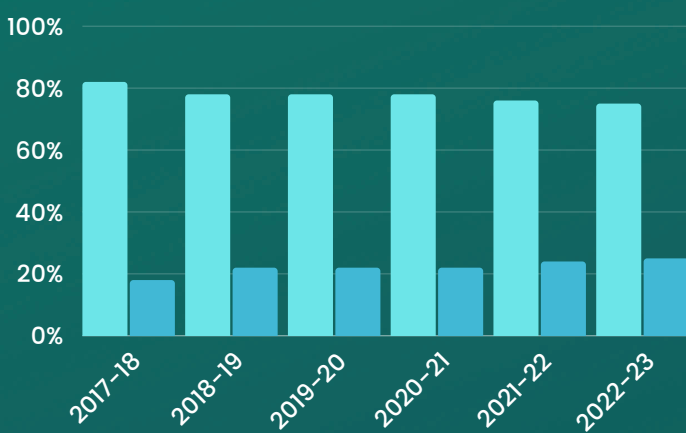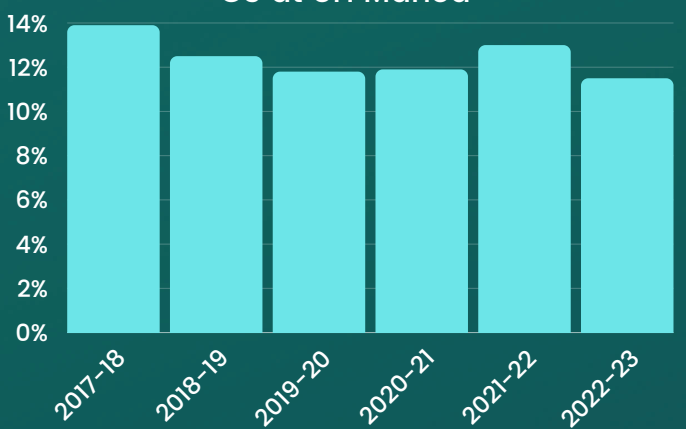Mentor: Dr. Anthony Peruma

Overview

With a rise of interest in computer science, they should feel prepared when entering college. The existing research in education and studies highlights the importance of early exposure to technology and programs and after-school programs were started to meet the need.

UH Mānoa ICS Undergraduate Enrollment

Percent of Male & Female Distribution in CS at UH Mānoa

Percent of Native Hawaiian and Pacific Islander students in CS at UH Mānoa

Objective

This research project explores the challenges faced by K-12 students in Hawaii, particularly those from marginalized groups, in accessing computing-related education and resources. Additionally, the project examines methods for introducing fundamental programming concepts to these students, thereby encouraging them to consider a career in computing.

Project Based Learning

Designed a 30-minute Scratch activity to enhance critical thinking and problem solving with student collaboration.

Mentor volunteers who play a role in facilitating student learning experiences.

Execution of the activity with elementary students to analyze the effects of visualization.

Future Work

Design a survey using Qualtrics XM, a survey tool, for K-12 CS teachers, students, and community members.

Conduct a pilot run of the survey to selected individuals to understand the limitations of computer science and make improvements.