

James Torres

(707) 716-6584 | jamesktorres2022@gmail.com (preferred) | jktorres@calpoly.edu | github.com/jam-kt

Technical Skills

Programming Languages: Java, Python, SystemVerilog

Tools: Git/Github, Vivado, UML documents

Technical Projects

PacMan Game Remake (<https://github.com/jam-kt/PacMan>)

Sep 2023

- Used Java and the Java Swing library to create a custom 2D game-engine
- Used A* heuristic algorithm for in game entity pathing
- Used a 2D array to represent the game's playable area and keep track of entities
- Strictly adhered to OOP principles

FPGA Digital Kitchen Timer (Digital Design final project)

Aug 2023

- Designed and implemented a kitchen timer with variable input, start, and reset functionality
- Used SystemVerilog to describe and connect hardware modules such as a FSM and Counters
- Worked collaboratively with a partner to draw and iterate on a low-level structural diagram

Huffman Encoder (Data Structures class project)

Mar 2022

- Used Python to create a Huffman Encoder that reads, compresses, then writes to a text file.
- Created a custom min-heap data structure and nodes to implement a priority queue

Ray Casting Model (Introductory Computing class project)

Nov 2022

- Used Python to render 3D spheres in variable lighting as a static 2D image
- Implemented representations of geometric vectors and points using Python classes
- Implemented command line arguments to accept user input for program variables

Education

California Polytechnic State University. San Luis Obispo, CA
BS Computer Engineering. GPA: 3.79

2022 - 2026

Coursework: Introductory Computing, Data Structures, Java & OOP, Intro to Digital Design, Assembly & Computer Design. Calculus (Multivariable), Linear Algebra & Differential Equations.

Future Coursework (By Summer '24): Systems Programming in C, Discrete Structures, Computer Architecture, Electronic Circuits

Involvement & Work Experience

Swimming & Volunteer Coaching

2016 - 2022

- Volunteer coach for city swim club. Worked with younger kids in the water to demonstrate technique (2hr/wk)
- Volunteered at local and travel swim meets as a timer/hospitality (4hr/month)
- 4 Year Varsity Athlete
- 2x Sierra Nevada Swimming Scholar-Athlete

City Of Vacaville Parks and Recreation | Lifeguard & Swim Instructor

June 2020 - Dec 2022

- Interact with patrons and enforce water-safety rules.
- Create curriculum for and instruct group swimming lessons for children and adults.