


Simranpreet Kaur

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EDUCATION

University of California, Santa Cruz

Sept 2019 - Present

Bachelor's of Science in Computer Engineering with a concentration in Robotics
Minor in Computer Science

GPA: 3.41

RELEVANT COURSEWORK

CSE101 Data Structures and Algorithms, **CSE12** Computer Systems and Assembly,
CSE120 Computer Architecture, **ECE103** Signals and Systems, **ECE13** Computer Systems and C,
PHYS5A Intro to Mechanics, **PHYS5C** Intro to Electricity and Magnetism, **MATH23A** Vector Calculus

WORK EXPERIENCE

Mentor Collective

Sept 2021 - Present

Mentor

UCSC

- Listen, help navigate college resources, offer career and academic advice, and help students set academic and personal goals to achieve the best success at UCSC

Baskin Engineering Lab Support

Sept 2021 - Apr 2022

Student Technician

Baskin School of Engineering, UCSC

- Provide instructional support for the BSOE receiving, electronics stockroom, and lab operations
- Assemble and sell electronic component kits for courses to students and admin
- Relocate, image, and troubleshoot computers, test equipment such as microcontrollers and oscilloscopes

Information and Technology Systems

Sep 2021 - Jan 2022

Zoom Corps Consultant

ITS, UCSC

- Attend remote lectures and campus events to provide live technical support and troubleshoot Zoom meetings
- Offer out of class Canvas and YuJa assistance to professors and TA's

PROJECTS

Frog Frenzy

CSE100

Verilog

Logic Design

- Created an interactive, object-oriented game in Verilog with dynamic visuals on a VGA monitor
- With the help of state machines, the frog was able to jump and swim across the moving plants
- An FPGA board was used to control the desired movement of the object and to display the score on a 7 segment display

Turkey Counter

CSE100

Verilog

Logic Design

- Created a game in Verilog using signals to count the number of turkeys crossing the sensors simulated by buttons on an FPGA board (BasysBoard3)
- Counter module kept track of turkeys crossing left to right, right to left, and in between the two sensors which was displayed on the board's LEDs and 7 segment display

BreadCrumbs

Aug 2021

Swift

SuperPositron Hackathon

- Interactive iOS app created using XCode and CocoaPods, to pin and share locations on a map using buttons and voice recognition

TECHNICAL SKILLS

Programming languages: C++, C, Python, Verilog(basic), Assembly(basic)

Hardware Skills: Basys3Board/FPGA, OpenscopeMZ, Digital System Design, Schematics, Oscilloscopes

Miscellaneous: Git/GitHub, Latex, Matlab, Numpy, Pandas, Matplotlib

RESEARCH IN PROGRESS

Testing Autonomous Vehicles

Sep 2022 - Present

Professor Jim Whitehead

Baskin School of Engineering, UCSC

- Test the behavior and efficiency of autonomous vehicles, when models of artificial intelligence pedestrians are put in various testing scenarios using Python