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

Relevant Coursework

CSE101 Data Structures and Algorithms, **CSE12** Computer Systems and Assembly,
CSE120 Computer Architecture, **ECE101** Electronic Circuits, **ECE103** Signals and Systems,
ECE13 Computer Systems and C, **PHYS5A** Intro to Mechanics, **PHYS5C** Intro to Electricity and Magnetism, **CSE107** Probability and Statistics

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

Technical Skills

Programming languages: C++, C, Python, Verilog(basic), Assembly(basic)
Hardware Skills: Basys3Board/FPGA, OpenscopeMZ, Digital System Design, Schematics, Oscilloscopes
Tools/Libraries: 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

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