

Matthew Faraz Tootoonchi

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EDUCATION

California State Polytechnic University, Pomona, August 2022

Bachelor of Science in Computer Software Engineering, Core GPA: 3.629

TECHNICAL SKILLS

- Software – Experienced in object-oriented design, algorithm design and data structures in multiple programming languages like Scratch, Java, C#, C/C++, Python, Lua, and Assembly
 - Knowledgeable using databases like pgAdmin being hosted on AWS with data communications being Flask in Python
 - Adapt at web development techniques like HTML, CSS, and JavaScript
- Hardware – Utilized Verilog and System Verilog in FPGA implementation
 - Controlled multiple Microcontrollers with a variety of programming languages
- Extra – Bilingual with the ability to speak both English and Farsi

PROJECTS

UAVs Docking

Spring 2022

- Designed a program that flies into the air then looks for a barcode to start the automatic landing process on
- Worked with multiple flight controllers like the Navio2 and Pixhawk wired to the Raspberry Pi and connected them to Mission Planner and python dronekit
- Developed computer vision software for the Pixy2 to look for barcodes to land on
- Talked with multiple experts in different jobs to devise a plan to develop our goals
- Selected to represent Cal Poly Pomona at the 36th Annual CSU Student Research Competition where our team was awarded \$100 for winning
- Finalist in NASA MINDS competition where our project was selected to receive \$1500 to finance which then our project ended up being picked to review by NASA due to its excellences

System on a Chip

Spring 2022

- Created an SoC on the Artix-7 100T FPGA with the MicroBlaze MCU
- Constructed multiple basic MMIO Cores and Video IP Cores to implement specific hardware tasks
- Developed multiple register maps for my MMIO Cores and Video IP Cores for co-workers
- Programmed device drivers in C++ to communicate with my MMIO Cores and Video IP Cores for application programming
- Worked on multiple applications that talk to device drivers for my SoC

WORK EXPERIENCE

Codakid, Programming Tutor

June 2021 – Present

- Correctly tutored up to 9 classes a day on how to program in java, Lua, Python, and Scratch
- Adapted to an ever-changing schedule due to kids needing specialized learning to fit their needs.
- Demonstrated that my tutees were able to build upon what they have been taught to create their own code