Monty Choy

montychoy00@gmail.com | 650.898.7160
San Francisco, CA

montychoy.com | linkedin.com/in/montychoy | github.com/mochoy | suild.com

Education

California Polytechnic State University, San Luis Obispo **(Rising Junior) Expected Jun. 2022**
BS Electrical Engineering - 3.94 Major GPA *San Luis Obispo, CA*

- Dean's List; CP SLO Breakers, Yu-Gi-Oh Club

Experience

Microsoft **Jun. 2020 - Sep. 2020**
Software Engineering Intern - Surface Duo Firmware *Sunnyvale, CA*

- Incoming software engineering intern on Microsoft Surface Duo firmware team.

Apple **(9 Months) Jan. 2019 - Sep. 2019**
Hardware Engineering Intern - Apple TV Hardware Engineering *Cupertino, CA*

- Designed electrical, mechanical, & software system to characterize IR performance
- Architected, prototyped & designed HDMI dev platform PCB. Design lead for DC-DC power, USB, & debug & assisted with high-speed digital & MCU subsystems
- Analyzed test coverage on factory line to ensure correct placement, value, etc. for every component through various test stations. Results increased component test coverage by over 25%
- Led validation, debug, and FA efforts: HDMI (CTS), PMU, SoC, UART, NAND, PCIe & PDM mic hardware subsystem, multilayer PCB failure, & line analysis

Suild **Feb. 2018 - Present**
CEO *San Francisco, CA*

- Shipped 700+ to 10+ countries through website with 30,000+ annual sessions & $15k+ revenue
- Managed entire product design lifecycle of multiple electronics products from concept, architecture, prototype, design, coding, validation, assembly, manufacturing, testing, & shipping
- Designed and programmed embedded electronics products implementing AVR MCUs, USB, UART, DC-DC switching and linear converters, & PID controlled inductive loads
- Developed frontend, backend, & system architecture e-commerce website with MERN stack

Projects

Find more at suild.com & montychoy.com

Nerf Select-Fire Rapidstrike Kit - suild.com/shop/4 **Jun. 2019 - Present**

- Designed & manufactured PCB-based product for select-fire control in modified Nerf blasters
- PCB implements MCU, USB, UART, analog, high-speed digital, DC-DC power, closed-loop inductive drive, & debug hardware subsystems

RISC-V MCU **June 2020**

- Designed MCU to implement RISC-V ISA on Basys 3 Artix-7 FPGA eval board

Technical Skills

- **Hardware Engineering:** ATMega328 & STM32 MCUs, I2C, SPI, USB, UART, HDMI, PCIe, high-speed digital design, MOSFETs, OSI PHY layer design, test coverage & HW validation
- **Power Electronics:** DC switching regulators, inductive drives, MOSFET drives, LiPo batteries
- **Software Engineering:** C++, C, RISC-V Assembly, Python, Java, JavaScript, data structures