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| EDUCATION | Massachusetts Institute of Technology , Cambridge, MA <i>M.Eng</i> , Computation and Cognition (Neuroengineering), June 2025 <i>B.Sc</i> , Electrical Engineering and Neuroscience, June 2023 | GPA: 4/4 GPA: 3.63/4 |
| EXPERIENCE | Hardware Developer Intern June 2022 - August 2022 Developed a comprehensive library of IC timers, SOICs, DIPs, temperature sensors, and other circuits utilized in industry-ready cards featured in the IBM Z Metis Main-frame through Cadence Allegro PCB Design software. | IBM Poughkeepsie, NY |
| | Undergraduate Research Assistant December 2021 - May 2022 Designed physical configuration of the AttentivU EEG headwear through soldering and connectivity testing. | MIT Media Lab Cambridge, MA |
| | Hardware Developer Intern June 2021 - August 2021 Developed code that enabled the autonomous update function using Yocto-based operating software on Raspberry Pi 3+ microcontrollers | Signify Remote |
| PROJECTS | Four-Stage BJT Broadband Amplifier (Analog Design Project) : Conceptualized and developed a four-stage broadband amplifier, achieving key performance metrics including a 48dB mid-band gain, 2.6 MHz bandwidth, and an 85 mW power consumption. The design incorporated three NPN common emitter amplification stages and a single PNP common-collector buffer for optimal functionality. Design awarded most innovative title in cohort. PicoRV32 CPU w/ on-chip memory (Integrated Circuit Design Project) : Designed, synthesized, and routed a 2ns clock-gated PicoRV32 IMC CPU that utilized on-chip Intel-designed 1080x36bit SRAM. Designed reduced PPA of original processor design by 22.6%. Design ranked 3rd overall in PPA efficiency. Xilinx FPGA AR Card (Digital Design Project) : Developed a system projecting interactive 3D figures onto an AR card's position on a monitor. Created a subprogram capable of detecting specific pixel RGB color concentrations in the camera frame, enabling the detection of the AR card's center of mass and angle deviation. Analyzed the FPGA's memory and signal processing utilization rates. SplitBit: RF Transponder Timing System (RF Project) : Created a low-cost automatic RF transponder sports timing system prototype. Designed a quadruple antenna circuit with op-amps for signal enhancement. | |
| COURSEWORK | Computer Architecture, Solid-State Circuits, IC Design and Analysis, Principles of Neuroengineering, Nanoelectronics | |
| AFFILIATIONS | Track and Field, Assistive Technology Team, National Society of Black Engineers, Bioelectronics Group, Jasanoff Laboratory | |
| SKILLS | Software/Programming : Python, MATLAB, Julia Programming, C, Verilog, Cadence Virtuoso, \LaTeX . Engineering : CAD, Soldering and Test Equipment, Circuit Design, FPGA Digital Design, Data Analysis, Embedded Devices | |