Travis Ziegler

⤴ tjz@mit.edu   ⤴ on the web   ⤴ on github

Education	**Massachussets Institue of Technology**	
	Bachelor of Electrical Engineering & Computer Science, 4.7 GPA	*Jun 2023*
	Master of Engineering in EECS, 5.0 GPA	*Jun 2023*

Selected Skills

Programming	C/C++, assembly, Python, SysVerilog, bash/Linux, Java, C#, javascript/web, MATLAB
Embedded	firmware dev for STM32, PSoC, ESP32, x86 UEFI, FPGA, PCB design with KiCAD
Other	TensorFlow, PyTorch, Apps (iOS/Android), Flutter, React, Photoshop, Illustrator, SolidWorks

Selected Projects

⤴ **GameMan** | *Hardware re-implementation of the original GameBoy*   *Aug '22 – Dec '22*
Cycle accurate Z80 CPU, RAM, and audio processing unit in SysVerilog to emulate 1980's GameBoy games with sound and VGA output on an FPGA.

⤴ **VGA-WIFI Streamer** | *A realtime embedded streaming solution*   *Mar '21 – May '21*
Hardware to mirror a computer screen on a VGA monitor wirelessly using ESP32+PSoc6 MCUs. Custom JPEG-like compression and DSP optimizations led to a 30 fps stream.

⤴ **MIT-XSS** | *Stealing MIT credentials for fun, not profit*   *Jun '20 – Aug '20*
Exploit in MIT's online platform to steal two-factor authenticated DUO sessions.

⤴ **iUSBAudio** | *A HAL MacOS audio driver + software package*   *Dec '20 – Jan '21*
Driver to route system audio to an Apple device for playback over USB. For hackintosh.

⤴ **Pinball XP** | *Space Cadet pinball on GooglePlay*   *Nov '19 – Mar '20*
1:1 Android port of Windows XP's poplular pinball game with native emulation.

⤴ **NotifyWho** | *A popular Android app on GooglePlay*   *Apr '19 – Jul '19*
WhatsApp extension to assign custom sounds and vibration patterns to specific contacts.

⤴ **FlappyOS** | *An x86 assembly implementation*   *Aug '17 – Nov '17*
Bootable Flappybird game for x86 using BIOS interrupts for graphics and IO.

Selected Work

MIT-IBM Watson AI Lab | *Cambridge, MA*
Internship for master's degree thesis   *Jun '22 – 23*
Gained industry experience in the AI field. Built embedded systems, optimized models, automation pipelines, and datasets for anomaly detection and classification tasks on edge.

MIT ORC Research Group Remote | *Remote*
Webmaster and maintainer of COVIDAnalytics.io   *Jun '20 – Jun '22*
Implementd CI + web deployment system. Updated, fixed, maintained, added to site. The site runs ML models to visualize COVID-19 case predictions and other COVID data.

LIQID Investment | *Berlin*
Financial Analyst Intern   *Jun '18 – Jul '18*
Collaboratively programmed automation systems for customer financial reporting. Analyzed and processed customer financial data to develop visuals, slides, and charts.

Selected Clubs

CPL Club | *Texas*
Founder and Maintainer   *Aug '17 – May '19*
Led sessions for high schoolers at biweekly **C**omputer, **P**rogramming, and **L**inux meetings.

Jiu-Jitsu @ MIT | *Cambridge, MA*
Webmaster and President   *Dec '19 – May '22*
Maintained and updated Jiu-Jitsu's website. As president, tended to club duties such as club/member registration, supply acquisition, organization meetings, etc.

Likes

I train martial arts and boxing. I like breaking records in the gym, playing basketball, drawing, reading, and barbequing with the guys. I dislike phony people and value honesty more than other traits.