Yehowshua Immanuel

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INTERESTS

Compilers, ISA Design, Hardware and Verification Language Tooling, Mathematics and Electromagnetics

EDUCATION

Georgia Institute of Technology | Atlanta, GA — Jan 2019 – Present
Masters in Computer Engineering

Georgia Institute of Technology | Atlanta, GA — May 2017 – Dec 2018
Bachelor of Science in Computer Engineering — GPA: 3.62 / 4.0

Kennesaw State University | Marietta, GA — Jun 2016 – May 2017
Transfer with 60 credit hours. — GPA: 4.0 / 4.0

SKILLS

Computing

Software Languages
⊠ C(expert in C, proficient in rest), C++, Java, Python, Basic HTML, BASH(and most standard UNIX utils.)

Hardware Languages
⊠ VHDL, Verilog, Python Migen HDL, Some Bluespec

Software Tools
⊠ Docker, Git, LaTeX, VIM, Regular Expressions, some Apache

Development Tools
⊠ GNU/BSD Make, GCC, Sub tools(ie: ar, nm)

APIs and Protocols
⊠ Ethernet, UART

Hardware
⊠ Raspberry Pi, FPGAs, Arduino, Embedded Arm, PCB Design

Arts

Music
⊠ Piano, Bass, LMMS(Linux MultiMedia Studio)

Film and Animation
⊠ Blender, Synfig Studio, Inkscape

Languages
⊠ English, proficient in French

EXPERIENCE

Synergy Lab, ECE Department, Georgia Tech
Master's Student, — May 2018 – Aug 2018
⊠ Implementing a reconfigurable ML hardware accelerator in an FPGA and accompanying compiler+driver stack

Electronic Systems Warfare Lab, Georgia Tech Research Institute
Student Assistant — Summer 2018 and 2019
⊠ Verified the mathematics of various mechanical models of simulated agents in the Scrimmage simulation engine.
⊠ Scripted and deployed Git version control commit rules
⊠ Built BSD POSIX Libraries for VXWorks RTOS and wrote accompanying drivers.

RetroTech, Georgia Tech
Student Assistant — Aug 2017 – May 2018
⊠ Diagnosed and restored legacy computers such as the Macintosh SE 1987. Deployed Verilog logic analyzer in FPGA to facilitate this process

Sensors and Electromagnetic Applications Laboratory, Georgia Tech Research Institute
Student Assistant — May 2017 – Aug 2017
⊠ Designed a printed circuit power board for an airborne radar.

PROJECTS

GHDL Maintainer — Jan 2020- Present
One of the maintainers of the Free and Open Source(FOSS) VHDL simulator GHDL.

LibreSOC Engineer, — Dec 2019- Present
I am a member of the LibreSOC organization currently funded by NLNet to create an open source RISCV capable complete SOC with a GPU that is open source to the bedrock.

nMigen Verilator Backend, — Dec 2019- Present
Currently adding Verilator simulator backend support to the nMigen Python HDL.

LEADERSHIP

Chi Alpha Worship Band — Aug 2018 – Present
Played bass for worship team.

FutureTech Middle School Outreach — Mar 2018
Lead FutureTech Exhibit at Georgia Tech to introduce middle schoolers to Computer Engineering

BCM Worship Band — Aug 2016 – May 2017
Played piano for worship team.