

Brian Ngo

304-629-6343 | bn00017@mix.wvu.edu | [linkedin.com/in/briannngo9](https://www.linkedin.com/in/briannngo9)

EDUCATION

West Virginia University

Bachelor of Science in Electrical and Computer Engineering

Morgantown, WV

Expected May 2028

- SoftwareWVU Founder & President
- Engineering College Ambassador
- IEEE & HKN

CGPA: 4.0

EXPERIENCE

West Virginia University

Teaching Assistant for Digital Logic (CPE-271)

Upcoming Fall 2026

Morgantown, WV

West Virginia University

Software Engineering Intern

May 2026 – Present

Morgantown, WV

- Modeled attack surface traversal via Dijkstra's on a MITRE ATT&CK technique graph
- Built a full-stack POA&M interface with schema, API, validation, and lifecycle tracking
- Mapped MITRE ATT&CK techniques to NIST SP 800-53 Rev 5 controls via a seeded join schema and surfaced mappings in the technique detail UI

Agile5 Technologies, Inc.

Software Development Intern

May 2025 – April 2026

Fairmont, WV

- Queried parallel Databricks SQL connections against federal databases across 400k+ records
- Built an AI audio transcription pipeline using FFmpeg, Whisper API, and Databricks
- 10,000+ LOC across 7 full-stack features backed by Databricks and AWS

PROJECTS

Simple 8-Bit CPU

- Designed an 8-bit CPU with 32 bytes of RAM and 3 unique opcodes
- Implemented on Intel DE-10 Lite FPGA device and programmed in VHDL

CMOS Inverter & Logic Circuit Design

- Simulated CMOS inverter, generated voltage transfer curves and calculated noise margins.
- Optimized MOSFET width and length parameters to achieve a symmetrical switching curve
- Designed and optimized multi-transistor CMOS logic circuit implementing $A+BC$

Custom Mechanical Keyboard PCB

- Designed a keyboard schematic in KiCad, including switch matrix, microcontroller, and supporting circuitry
- Executed component placement and PCB layout using ERC to follow design rule constraints

TECHNICAL SKILLS

Hardware: Intel DE-10 Lite FPGA, Arduino, Various ICs

Languages: Python, MIPS, and ARM Assembly, TypeScript, VHDL, Java, MATLAB

Tools: Quartus Prime, KiCad, LTspice, QSPICE, Git/Github