Paul Serbanescu

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Education

Georgia Institute of Technology — Atlanta, GA
Bachelor of Science in Computer Engineering, GPA: 3.22 — Aug 2024 — Expected May 2026

Binghamton University - Watson College of Engineering — Binghamton, NY
Transfer with 62 Credit Hours, GPA: 3.91 — Aug 2023 — May 2024

Skills

Programming: Java, Python, C, C++, Swift, SwiftUI, HTML/CSS, React, Next.js, JavaScript, TypeScript, Verilog, VHDL
Software: Git, Xcode, Android Studio, Blender, Onshape CAD, Adobe Products, NI LabVIEW, Intel Quartus Prime
Hardware: Intel DE-10 Standard FPGA, RISC-V, Nangate45, Oscilloscope, Teensy, Raspberry Pi, Beaglebone, Soldering

Work Experience

Georgia Tech Department of Chemistry and Biochemistry — Atlanta, GA
Team Lead, Software Engineer — Aug 2024 — Dec 2024
- Built online laboratory simulation webpage by integrating Three.js, Next.js, and React to build frontend components.
- Led team of 6 to establish Git workflows pipelined to Plesk hosting platform to serve Node.js site on university domains.
- Focused on accessibility and UI/UX for ease of use optimized for target audience, communicating with faculty for feedback.
- Achieved a 10-second reduction in loading times through a 500% reduction in asset size and migration to Next.js framework.

Stuy Schedule App — New York, NY
Creator, iOS Developer — Jan 2022 — Jun 2024
- Developed a scheduling utility app for high school students, accumulating over 3,700 downloads and 1,000+ daily users.
- Used Swift and Xcode to develop multiplatform versions published to the Apple App Store through App Store Connect.
- Created accompanying JSON API serving updated information to users, intelligently downloading data to reduce overhead.
- Integrated the latest iOS 16 features in Swift and SwiftUI, including home and lock screen widgets with live updated info.

Extracurricular Experience

Binghamton University Mars Rover Team — Binghamton, NY
Firmware Developer — Sep 2023 — May 2024
- Interfaced with rover subsystems using localized Teensy microprocessors to send commands over CAN using C++ code.
- Debugged all firmware systems, referring to documentation for non-trivial issues, and fixed CAN communication issues.

First Tech Challenge Stuy Fission Robotics Team — New York, NY
Vice President, Head of Software Engineering — Aug 2021 — Jun 2023
- Guided the team in technical discussions, including hardware and software, and delegated tasks among small groups.
- Planned community events, robot showcases, lab tours, fundraising of over $2,000, and operated robot during competitions.
- Managed team budget of $4,000 and negotiated with school administration a $1,000 budget increase over the prior year.
- Developed robot control systems using Java, including teleoperated and autonomous modes with OpenCV and TensorFlow.
- Created a Java code library (FissionLib) which was published through JitPack and open-source to all teams on GitHub.

Personal Projects

Zephyr — Atlanta, GA
CPU built in Verilog — Oct 2023 — Present
- Architected an 8-bit CPU with 4 registers, 16 words of program memory, ALU, program counter, and instruction register.
- Integrated an RTL-to-GDSII flow to produce a fabrication-ready design on the Nangate45 platform with placement macros.

Relevant Coursework

- **Hardware/Software Systems:** RISC-V, C
- **Digital System Design:** Breadboard, NI myDAQ
- **Computer and Networking Systems:** C
- **Digital Design Lab:** VHDL, FPGAs, Quartus
- **Data Structures and Algorithms:** Java
- **Math:** Calculus I, II, III, and Differential Equations