Jacob Polacek

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EDUCATION

Cornell University, College of Engineering Ithaca, NY
Bachelor of Science in Computer Science August 2017 - May 2021
GPA: 3.806 **Dean's list**: Fall 2017, Spring 2018, Fall 2018, Spring 2019

Relevant Coursework:
Data Structures and Functional Programming • Object-Oriented Programming and Data Structures • Algorithms
Operating Systems • Computing Using Python • Discrete Structures • Digital Logic and Computer Organization
Embedded Systems • Technology Inside Smartphones

Westhill High School Syracuse, NY
Advanced Regents Diploma with Honors in Math and Science August 2013 - June 2017
GPA: 101.167
Awards: Salutatorian, National Honor Society, AP Scholar with Distinction, Old English W (2013-2017)

EXPERIENCE

SRC, Inc. *Syracuse, NY*
Electronic Warfare Unit Software Engineering Intern, CNY STEM Scholar *May 2019 - August 2019*

- Rewrote and extended C# interfaces to reach compatibility with latest .NET Framework.
- Designed and implemented Python, MSBuild, and Batch scripts to automate compiling, packaging, testing, deployment, and documentation.
- Redesigned and rebuilt WPF tool that creates system configurations to utilize upgraded CREW Duke hardware.
- Worked in an Agile workflow on U.S. Government contracts requiring a confidential security clearance.

Technologies: C#, XML/XAML, Python, Java, WPF, .NET Framework and Core, Perforce, Bamboo

Cornell Hyperloop *Cornell University, Ithaca, NY*
Hardware Subteam Lead *August 2017 - Present*

- Lead a team to design and build the electrical system for a Hyperloop pod for the SpaceX Hyperloop Competition.
- Develop software and configure hardware to autonomously control the pod in response to position, speed, and orientation, with support for manual override.
- Prepare Preliminary and Final Design Reviews to present to SpaceX Engineers in order to receive design feedback.
- Advanced in the 2018 Competition on the merits of our pod's design, including communication and safety systems.

Technologies: C/C++, Python, Java, Arduino, Beaglebone Black

ECHO Drone *Syracuse, NY*
Team Lead, Lead Programmer *September 2016 - June 2017*

- Built a drone that follows users overhead using an Arduino, ultrasonic sensors, and other specialized hardware.
- Organized engineering design process from Preliminary, Midterm, and Final Design Reviews to a Final Report.
- Presented Final Report to engineers from Apple and General Electric to receive feedback, which was used to improve safety features in later iterations.

Technologies: C/C++, Arduino, RFDuino

SKILLS

Functional Programming
Object-Oriented Programming
Software Engineering: OCaml, Python, Java, JavaScript (React, Redux), C#, C/C++, XML/XAML, MySQL, LaTeX
Programs/Tools: Git, Visual Studio, VSCode, MSBuild, WPF, .NET Framework, Batch Processing, Perforce, Bamboo, Confluence, Enthought Canopy, Inventor, NI Multisim

INVOLVEMENT

Cornell Interfraternity Council: Vice President of Programming, Representative for the Greek Growth Council
Cornell Student Assembly: Tri-Council Liaison (Ex-Officio)
Delta Tau Delta Fraternity: Recruitment Chair
Cornell Orientation Steering Committee: Orientation Leader