Jacob Polacek

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EDUCATION

Cornell University, College of Engineering *Ithaca, NY*
B.S. in Computer Science, External Specialization in Law & Society *August 2017 - May 2021*
GPA: 3.83/4.00 **Dean's list**: All Semesters

Relevant Coursework: Data Structures and Functional Programming • Object-Oriented Programming • Computer Vision Algorithms • Operating Systems • Information and Language • Discrete Structures • Digital Logic • Embedded Systems

EXPERIENCE

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

- Rewrote and extended over 100 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 Windows Presentation Foundation 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*
Electrical Team Lead *August 2017 - Present*

- Lead a team of 40 undergraduates 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 2019 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

Slack *San Francisco, CA*
Incoming Security Software Engineering Inter *June 2020 - August 2020*

- Ensure the security of Slack's products through the development of new libraries, tools, frameworks, and services.
- Establish a comprehensive and innovative approach to address Slack's core security issues while enabling development teams with agile execution of new features and services to customers.

SKILLS

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

INVOLVEMENT

Cornell Greek Life: IFC Vice President of Programming, Greek Growth Committee Representative, Greek Judicial Board, Mental Health Committee Representative, Order of Omega Honor Society
Cornell Student Assembly: Tri-Council Liaison (Ex-Officio)
Delta Tau Delta Fraternity: President, Recruitment Chair
Hobbies/Interests: Hockey, Hiking, Soccer, Crosswords, Traveling, Dogs