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: 3.861/4.000 **Dean's list**: All Semesters
Relevant Coursework: Programming Languages & Logic • Data Structures & Functional Programming • Object-Oriented Programming • Computer Vision • Analysis of Algorithms • Operating Systems • Discrete Structures • Embedded Systems

EXPERIENCE

Slack *(Remote) San Francisco, CA*
Software Engineering Intern, Product Security Foundations *June 2020 - August 2020*

- Developed an HTML sanitization library in Hacklang to prevent the execution of cross-site scripting attacks (an OWASP Top 10 Security Vulnerability).
- Integrated the project into development for use on Slack to protect its users and the company.
- Open sourced library via Slack HQ's repository to enable external developers to address security vulnerabilities.

Technologies: Hacklang, PHP, Git, JIRA, HTML

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 - December 2019*

- 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.

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

Software Engineering: Hacklang, PHP, Python, Java, JavaScript (React, Redux), SQL, C#, C/C++, OCaml, XML/XAML
Programs/Tools: Git, Prometheus, Grafana, Kibana, VSCode, MSBuild, WPF, .NET Framework, Batch Processing

INVOLVEMENT

Cornell Greek Life: Recruitment Committee Representative, IFC Vice President of Programming, Greek Growth Committee Representative, Greek Judicial Board Representative, Mental Health Coalition Representative, Order of Omega
Mortar Board Der Hexenkreis Senior Honor Society
Delta Tau Delta Fraternity: President, Recruitment Chair
Hobbies/Interests: Hockey, Hiking, Soccer, Crosswords, Traveling, Dogs