

# Jake Polacek

San Francisco, CA | jacpolacek@gmail.com

## EXPERIENCE

### SLACK, PRODUCT SECURITY

Aug. 2022 – Present

Feb. 2022 – Aug. 2022

July 2021 – Feb. 2022

Software Engineer II

Software Engineer I

Associate Software Engineer

- Developed a comprehensive two-factor authentication library to simplify authentication on any customer-facing endpoints and redesigned the frontend for our Typescript/React infrastructure to improve user experience.
- Solely enhanced and fortified operational resilience of the Go-based image processing service to guarantee the secure processing of user-uploaded content and provide a reliable end-user experience.
- Fortified proprietary APIs through the development of an intuitive, robust, and reusable permissions framework to reduce the likelihood of authorization-related incidents.
- Drove the full lifecycle development of an internal service leveraging Node.js, GraphQL, and React, enabling developers to efficiently discover and understand the permissions framework's modular components.
- Secured FedRAMP Moderate and High authorizations through Python automation of vulnerability detection, processing, and reporting to ensure 99% of vulnerabilities are patched within SLA.
- Implemented secure-by-default URL library for manipulating and parsing malformed or malicious URLs in a safe, predictable manner to prevent incidents, such as server-side request forgery attacks.

June 2020 – Aug. 2020

Software Engineer Intern

- 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.

### SRC INC, ELECTRONIC WARFARE UNIT

May 2019 – Aug. 2019

Software Engineer Intern

- Rewrote and extended over 100 C# interfaces to reach compatibility with the 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.

### CORNELL HYPERLOOP, ELECTRICAL TEAM

Jan. 2019 – Dec. 2019

Team Lead

Aug. 2017 – Dec. 2018

General Member

- 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, or manual override signal.
- Prepare Preliminary and Final Design Reviews to present to SpaceX Engineers in order to receive design feedback.

## EDUCATION

### CORNELL UNIVERSITY

COLLEGE OF ENGINEERING

B.S., COMPUTER SCIENCE

Aug. 2017 – May 2021

College of Engineering

GPA: 3.9/4.0, Magna Cum Laude

External Specialization in Law & Society

### RELEVANT COURSEWORK

Programming Languages & Logic  
Data Structures & Functional Programming  
Cryptography  
Computer Vision  
Application to Computer Graphics  
Analysis of Algorithms  
Operating Systems  
Discrete Structures  
Embedded Systems  
AI Practicum  
Language & Information

## SKILLS

### LANGUAGES

Python | Hacklang | PHP | Go  
Typescript | MySQL | OCaml  
C# | C/C++ | Java

### TOOLS & FRAMEWORKS

Docker | Kubernetes | Bedrock  
React.js | Node.js | Next.js

### DATABASES

ArangoDB/QL | MySQL | Vitess

### MONITORING & VISIBILITY

Elastic | Grafana | Prometheus

## LINKS

jakepolacek.com  
github.com/JPolacek  
linkedin.com/in/jake-polacek/

## INTERESTS

Running | Public Transportation  
Film Photography | Urban Design  
Hockey | Soccer | Baseball