

# Tim Krach

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## SUMMARY

Experienced Software Engineer with a strong background in cybersecurity, reverse engineering, and embedded systems. Proven ability to lead teams, manage projects, and develop innovative solutions. Fluent in business level Japanese and possess a Japanese Engineering Work Visa. Seeking opportunities in Japan to leverage my technical skills and cultural knowledge.

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## EXPERIENCE

### English Teacher

AEON 英会話

May 2022 – April 2024, Tokyo, Japan

- Instructed adults and children English as a second language in a Japanese workplace.
- Facilitated effective communication by engaging with coworkers in both English and Japanese.

### Cyber Defense Instructor

Loyola Blakefield High School

August 2021 – May. 2022, Towson, MD

- Coached students to participate in multiple cybersecurity competitions focusing on OS defense and vulnerability management including the US Air Force's CyberPatriot National competition.
- Instructed students on how to locate and mitigate security vulnerabilities, and malware in various distributions of Linux, including Ubuntu, CentOS, and Debian.
- Led a Linux+ crash course for students to be able to pass the CompTIA certification on Linux management.

### Windows Software Engineer

Vulnerability Research Labs

June 2020 – August 2020, Columbia, MD

- Worked closely with C++ and Python development on a low-level, Windows environment.
- Reverse engineered Windows libraries using IDAPro to improve software compatibility.
- Collaborated in a fast paced team environment optimizing customer facing software in a large codebase using Git.
- Engaged with secure infrastructure in a Top Secret industry environment.

### Embedded Developer

Booz Allen Hamilton

June 2019 – August 2019, Annapolis Junction, MD

- Led a team of 3 to reverse engineer a network attached storage device to discover exploitable vulnerabilities in software and hardware.
- Participated in a reverse engineering class led by industry experts.
- Formulated and carried out a vulnerability remediation plan to address the exploits found on the device.
- Worked extensively with Ghidra, Kali Linux, BurpSuite, Wireshark, logic analyzers, and various tools for vulnerability research.

### Software Engineer

Booz Allen Hamilton

June 2018 – August 2018, Annapolis Junction, MD

- Collaborated with a team of 4 engineers to create a mesh-network framework to be used on a custom-built hardware device to provide secure, robust, mesh-networks across long distances.
- Developed framework in C from the ground up, involving raw-sockets, custom networking protocols, and virtualization.
- Built for use on a raspberry pi along with custom radio hardware components.
- Worked extensively with networking, hardware and software design, C programming, and LoRa

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## EDUCATION

### Bachelor of Science in Computer Science

Minor in Japanese • University of Maryland College Park

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## SKILLS

**Programming Languages:** C, C++ Python, Java, Kotlin

**Cybersecurity:** Penetration Testing, Vulnerability Assessment, Reverse Engineering, Threat Analysis, OS Hardening

**Tools:** Ghidra, IDAPro, VMware, Docker, Kali Linux, Metasploit, Burp Suite, Wireshark

CompTIA Network+ Certification