JONATHAN TROWBRIDGE

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CAREER SUMMARY

Software engineer with over a decade of success building secure, scalable systems across web, mobile, and backend. Currently transitioning into cybersecurity with a focus on penetration testing, backed by practical experience through the Offensive Security Certified Professional (OSCP+), SANS Applied Cybersecurity (ACS) program, GIAC certifications (GPEN, GCIH, GSEC, GFACT), and Capture the Flag (CTF) events. Brings a strong foundation in full-stack development, secure coding practices, and vulnerability analysis. Recognized for leadership, mentorship, and cross-functional collaboration, with a strategic approach to system design and a strong commitment to continuous learning in cybersecurity.

EDUCATION & CERTIFICATIONS

Undergraduate Certificate in Applied Cybersecurity (GPA 4.0)	SANS Technology Institute	Jun. 2025
Bachelor of Science in Computer Science	Virginia Commonwealth University	Dec. 2013
Offensive Security Certified Professional (**OSCP**)	OffSec	Oct. 2025
Enterprise Penetration Testing (**GPEN**)	SANS Technology Institute	Jun. 2025
Security Incident Handling & Hacker Exploits (**GCIH**)	SANS Technology Institute	Apr. 2025
Security Essentials (**GSEC**)	SANS Technology Institute	Feb. 2025
Security Foundations (**GFACT**)	SANS Technology Institute	Dec. 2024

COMPETENCIES & SKILLS

Languages: Kotlin, Java, C#, Python, Bash, Dart, JavaScript, TypeScript
Development Frameworks: Flutter, Android, iOS, Xamarin, Riverpod, React, Angular, Ktor, ASP.NET, Node.js
Databases: Microsoft SQL Server, SQLite, PostgreSQL
IDEs: IntelliJ IDEA, IntelliJ Rider, Visual Studio Code, Android Studio, Xcode, Visual Studio, Vim
Tools: Nmap, Netcat, Ligolo-ng, Metasploit Framework, Sliver C2, Bloodhound, NetExec, Impacket utilities, Burp Suite, Mimikatz, Rubeus, certipy, smbmap, ldapsearch, rpcdump, snmpdump, Responder, Hashcat, John the Ripper, ffuf, feroxbuster, gobuster, sqlmap, evil-winrm, Potato family, Winpeas, Linpeas, git, and many more

PROFESSIONAL EXPERIENCE

Lead Principal Software Engineer | Coinme | Seattle, WA (Remote)   Sept. 2021 - Oct. 2024
- Led the end-to-end migration of the Coinme native iOS and Android applications to Flutter, unifying the mobile codebases and significantly improving developer velocity, code reuse, and release frequency.
- Designed and implemented a scalable application architecture using Riverpod, enabling maintainable, testable, and modular code to support rapid feature growth.
- Directed key engineering initiatives including onboarding, mentorship, and team process improvements enhancing team productivity, consistency, and long-term scalability of development efforts.

Senior Full Stack Software Engineer | CoStar Group | Richmond, VA (Hybrid)   Jan. 2019 - Aug. 2021
- Led development of a commercial real estate listing module for Android, along with the supporting ASP.NET Core Web API, delivering a seamless end-to-end solution used across platforms.
- Built and maintained scalable web applications with React, .NET, and Node.js, and developed a reusable .NET Core AWS push notification system adopted across the organization to support real-time, cross-platform communication.
- Collaborated cross-functionality with design, product, and engineering teams to deliver intuitive user experiences and ensure consistent, high-quality feature releases across mobile and web.

Full Stack Software Engineer | Mapleton Hill Media | Boulder, Colorado   Aug. 2016 – Feb. 2018
- Built cross-platform iOS and Android applications using Xamarin Native and Xamarin Forms, delivering custom mobile solutions across including skiing, agriculture, and logistics.
- Developed and modernized backend systems with ASP.NET and Azure Mobile App Services, including migrating monolithic APIs to modular services and implementing robust unit testing.
- Engineered real-time inventory and shipping synchronization within a cross-platform mobile application, using advanced PCL code and LINQ queries to streamline data flow across distributed devices and APIs.

Full Stack Application Developer | Worldview Solutions Inc. | Richmond, VA   Feb. 2013 – Feb. 2016
- Led implementation of claims-based authentication and user management systems for government applications, including a secure recruiting portal for the U.S. Air Force, enhancing access control and compliance.
- Developed environmental and conservation-focused modules for Virginia state agencies using Backbone, Marionette, and ASP.NET Web API, improving regulatory workflows and monitoring efficiency.
- Modernized legacy web applications, including migrating from jQuery to Dojo, resulting in improved performance, user experience, and maintainability.

PRACTICAL CYBERSECURITY EXPERIENCE & SIDE PROJECTS
Capture the Flag (CTF) Events
- Participated in the SANS GCIH and GPEN CTF events, applying knowledge of attacker tactics, techniques, and procedures (TTPs) aligned with real-world threat scenarios.
- Completed over 205 hands-on cybersecurity challenges on TryHackMe and Hack The Box, covering topics such as enumeration, privilege escalation, exploitation, persistence, and reverse engineering.

Full-Stack Flutter + Ktor Starter Kit | Project Bootstrap Template | Private Repository
- Built a full-stack Flutter frontend and Ktor backend as a boilerplate project to accelerate rapid application bootstrapping, supporting user registration, profile updates, and SMS-based two-factor authentication (2FA).
- Implemented JWT-based authentication and authorization, with MySQL for persistent user data, Redis for transient 2FA token storage, and GitHub Actions for automated backend deployment.
- Architected the Ktor backend using a modular, feature-based structure grounded in Clean Architecture principles and Domain-Driven Design (DDD), organizing core business logic into clearly defined use cases to enhance separation of concerns, scalability, and testability.

Bit Cast | Android Application | Private Repository
- Built a native Android application that facilitates the sequential streaming of torrent media for playback on the local device or Chromecast devices.
- Powered media playback using a custom VLC/libVLC wrapper.
- Integrated in-app torrent search capabilities, enabling users to find and stream content without leaving the application.

Maneki Torrent Search | Android Application | https://github.com/masterwok/maneki
- Built a native Android application that integrates with the Jackett torrent indexer aggregation engine.
- Implemented a custom Foreign Function Interface (FFI) to enable direct interop between Kotlin and a Jackett .NET Core library, offloading indexer management to the Jackett project.
- Leveraged cross-runtime communication to reduce maintenance overhead and align with upstream improvements.

Simple VLC Player | Android Library | https://github.com/masterwok/simple-vlc-player
- Developed a comprehensive Android media player library leveraging the core libVLC library and Open Subtitles API, facilitating seamless media playback on Android and Chromecast devices