DUNCAN **BARNES**

San Jose, CA 95127 | (408) 605-4128 | duncanbarnes02@gmail.com | **WWW:** inkedin.com/in/duncanjbarnes/ | **WWW:** github.com/dbar2002

Summary

Security Software Engineer specializing in embedded systems security, cryptographic key management, and automated threat response. Skilled in building secure systems across Linux environments, developing automation for security-critical workflows, and debugging system-level issues. Proficient in C++, Python, and cybersecurity principles with hands-on incident response and endpoint security automation.

Expertise

- **Full-Stack Development (React, Flutter, Python)**
- **AI/ML Integration (TensorFlow, OpenCV)**
- **Cloud Platforms (Azure, Firebase, GCP)**
- **Agile & Scrum Methodologies**

Skills

- **Languages:** C++, Python, Java, JavaScript, SQL
- **Systems & Security:** Linux (Ubuntu, Kali), Endpoint Security, Threat Detection, Secure Software Development
- **Security Concepts:** Cryptography fundamentals (symmetric/asymmetric encryption, PKI), Key lifecycle concepts, Secure communications, Incident Response
- **DevOps & Automation:** GitHub Actions (CI/CD), Microsoft Azure, Google Cloud Platform
- **Tools:** Jira, Confluence, Prometheus, Microsoft Defender, Vectra
- **Other:** REST APIs, Log Correlation, Automation Scripting

Experience

Information Security Engineer and Analyst
Fremont Bank   **Livermore, CA**

- Engineered automated security tooling integrating Microsoft Defender and Vectra APIs, reducing manual incident triage time by 50%.
- Designed and deployed automated threat containment workflows, reducing endpoint mitigation time from 15 minutes to under 2 minutes across 500+ systems.
- Developed IP blocking and response automation processes to improve real-time containment capabilities.
- Correlated multi-source telemetry (Prometheus, Symantec Blue Coat, Defender logs) to improve detection accuracy and reduce false positives.
- Partnered with IT and engineering teams to deploy hardened security configurations across enterprise endpoints.
- Contributed to secure software practices including code review and validation of security-related automation scripts.

Software Engineering Intern
IAmI Authentications   **Remote**

- Developed secure web application features using React.js and Python, contributing over 500 lines of modular code.
- Built and tested dynamic UI components for real-time authentication workflows.
- Established and maintained a secure ngrok tunnel for live API testing and webhook simulation.
- Conducted over 10 code reviews, enforcing best practices in JavaScript and React development.

Project Management Intern
Thales Group   **San Jose, CA**

- Supported five concurrent engineering projects by organizing sprint planning data and maintaining documentation in Jira and Confluence.
- Generated weekly financial and resource reports for two high-priority projects, enhancing tracking accuracy by 30%.
- Developed three comprehensive Gantt charts and risk matrices for leadership reviews, aiding decision-making.
- Collaborated with over 12 engineers to track deliverables and ensure timely completion of sprints.

Projects

Sign Language Augmented Reality AI Software

- Developed HoloLens 2 application integrating AI inference models in a constrained hardware environment.
- Implemented TensorFlow-based model for gesture classification.
- Focused on performance optimization and real-time data processing.

Social Media App

- Led a team of 5 in designing a video-based platform for iOS and Android, connecting students to employers and recruiters based on student individuality and enabling project posting
- Competed in two business plan competitions and placed 2nd and 3rd place

Interactive Campus Buildings App

- Engineered Flutter-based application enabling users to report campus safety concerns in real time.
- Integrated Firebase backend with structured event logging and secure API communication.

Education and Training

Bachelor of Science: **Computer Science**
California Baptist University   Riverside, CA

- **Related Coursework:** Data Structures, Algorithms, Artificial Intelligence, Software Engineering, Discrete Structures, Operating Systems and Networking, Human-Computer Interaction, Graphics and Visual Computing, Embedded Systems
- **National Society of Black Engineers** President, 2023-2024