THOMAS A. KILBRIDE

PGP Key Fingerprint

8CA4 8A5E 7841 FB3F FBCE
FFEC DD2F 0AD9 7068 4D2F
RSA4096 / 0x70684D2F

CONTACT

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EDUCATION

Purdue University, West Lafayette, IN
Studied Electrical Engineering (Minor in Economics)

EXPERIENCE

Waymo, LLC.   Security Engineer   Spring 2020 - Present

Currently working on a new security program to secure the hardware of Google's self driving car. Responsibilities include: security architecture reviews, reverse engineering, and developing hardware security prototypes for proof-of-concept demonstrations.

Jump Trading, LLC.   Senior Security Software Engineer   Fall 2019 - Spring 2020

Worked with the core Linux and quantitative trading teams at Jump Trading to secure Jump's cryptocurrency and high frequency trading infrastructure. Responsibilities include: code and architecture security reviews, endpoint agent software engineering, threat modeling, and reverse engineering.

Amazon, Inc.   Security Engineer, AWS   Winter 2017 - Fall 2019

Consulted with teams across Amazon AWS and Amazon Go to help improve the security posture of current and future embedded products. Responsibilities included: security architecture reviews, hardware systems integration, embedded TPM and TrustZone implementations, reverse engineering, and cryptographic protocol design.

IOActive, Inc.   Embedded Security Consultant   Spring 2016 - Winter 2018

Consulted with clients and vendors to help secure their products. Reverse engineered software and hardware to find new vulnerabilities in order to write Proof-of-Concept demonstrations. Focused on embedded systems in IC-Engine vehicles and OEM Engine Control Units. Refined internal research processes and led research sponsored projects to completion. Presented embedded security research at technical conferences such as RSA and Blackhat 20.

Radical Transport, LLC.   Embedded Systems Engineer   Fall 2015 - Spring 2016

Worked with a small team making hoverboards for Mark Cuban. Responsible for designing hardware to control a two-wheeled self-balancing scooter. Heavily involved with initial concept design, proof-of-concept demonstrations, and prototyping.

SKILLS

Programming skills in Python, Java, Go, C, PHP, FPGA, Verilog/HDL, and ARM/x86 Assembly
Security Engineering experience in TrustZone, IDA Pro, Binary Ninja, Ghidra, Burp Suite, and Cryptography
Experience in PCB Layout, Signal Integrity, SPI, I2C, UART, USB, CAN Bus, DDR, and Computer Architecture
Circuit debugging skills with Logic Analyzers, Spectrum Analyzers, Network Analyzers, and Oscilloscopes

ACHIEVEMENTS

Quoted as an expert in the April 2018 issue of Popular Mechanics regarding the 2017 Equifax breach
Released security research on Segway Scooters–disclosure and proof-of-concept were featured by Bruce Schneier, Forbes, and Wired Magazine
Technical presenter on embedded security research at RSA and Blackhat
Founder of Toucan, a company and iOS application selected to interview for the YCombinator S14 batch

PROJECTS
Delivered results for multiple security research projects at IOActive Labs research
Co-Founder of Toucan Checkout, a mobile ordering & payment system
Co-Founder and team lead of the Purdue Formula SAE (FSAE), Purdue University's Electric Formula Racing Team
Technical Director of BoilerMake Badge Design Team