

# KALEB KIRCHER

SOFTWARE ARCHITECT/ENGINEER

## PERSONAL BACKGROUND

Hello! I'm a software architect and engineer with over 15 years of experience building applications and back-end infrastructure. I have particular expertise in Android and iOS having built and published dozens of applications in a number of different markets, but mostly specializing in embedded telematics and autonomy. I am one of the few who can say they have published an application in every version of Android.

I co-founded a company in college that designs embedded aftermarket automotive controllers. We developed what are still some of the most advanced products in the market today.

I founded my own app development and consulting company after college writing one of the first mobile applications to interface with a vehicles OBD2/CAN system allowing users to diagnose check engine lights and measure vehicle performance. I have since built numerous applications to monitor and track driver behavior via GPS and OBD2/CAN for shipping, oil exploration and insurance companies including one of the first available ELOG/ELD Compliance systems.

I have built applications for companies that provided high definition video from manned aircraft and drones in civilian law enforcement and military applications including developing path planning, image stitching, and an innovative UDP based live streaming H264 protocol.

Currently, I build OEM and aftermarket applications for autonomous agriculture with applications in precision vehicle guidance and automated application control.

## ADDITIONAL SKILLS

- Application and back-end architecture
- Android Open Source Project
- AWS, GCS, Firebase
- DevOps CI/CD pipelines
- Automated Testing including Device Farms
- Project Management (Agile and Waterfall)
- UI/UX design
- Product design
- Team leadership
- Mentor/Educator (Volunteer AP CS teacher)
- Open Source contributor at large

## CONTACT ME.

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Greater Denver Area

## PROFESSIONAL CAREER

### SOFTWARE ARCHITECT AND ENGINEER TRIMBLE NAVIGATION, | 2017 - CURRENT

- Architect and Engineer for Precision IQ in cab display application based on Android
- Implemented various quality control tools reducing crashes by over 50%
- Re-implemented and architected large portions of a one-million LOC application from early Android patterns to more modern patterns like MVVM
- Redesigned and implemented large portions of the UI/UX
- Improved SQLite performance by upwards of 100x in some cases
- Implemented the GLES render engine with performance improvements of 5x

### VP OF ENGINEERING

#### ShaleApps | 2016 - 2017

- Lead mobile, web and back-end engineering teams with 24 direct reports
- Implemented a full CI/CD pipeline with automated integration and unit testing
- Re-implemented Android and iOS logistics applications
- Reduced application crash rate by over 80%

### LEAD MOBILE DEVELOPER

#### Churchill Navigation | 2015 - 2016

- Developed applications for civilian and military aviation surveillance systems
- Developed real-time, low latency, high definition stream video libraries for iOS and Android using an innovative UDP based H264 video protocol

### FOUNDER/ENGINEER

#### KIRCHER ELECTRONICS, LLC | 2012 - CURRENT

- Force OBD2 is the original OBD2/GPS based vehicle performance mobile application
- Various mobile applications for insurance companies, smart appliances, drones and telematics

### CO-FOUNDER/ENGINEER

#### SIRCH LABS, LLC | 2006 - 2012

- Co-designed ARM based embedded automotive controllers
- Product and PCB design
- Algorithm, firmware and application software development
- UI/UX, branding, sourcing raw materials, accounting, legal, etc...

## ACADEMIC BACKGROUND

### REGIS UNIVERSITY

#### Bachelor of Science Computer Science | 2007-2010

- Suma Kuma Laude

#### Bachelor of Science IT Administration | 2007-2011

- Suma Kuma Laude

## HOBBIES AND INTERESTS

- Experienced automotive mechanic
- Reverse engineering and tuning automotive ECU's
- Metal fabrication
- Skiing
- Playing drums and guitar