

# NICHOLAS ARNER

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## Skills

Development languages: Swift, Objective-C, Python

Frameworks: ARKit, CoreML, CreateML, CoreVision, CoreVideo, CoreAudio, CoreBluetooth, UIKit

## Experience

### **FREELANCE DEVELOPER / PERSONAL PROJECTS; COLUMBUS, OHIO – SEPTEMBER 2019 - PRESENT**

Working with startups and other clients on iOS development and other experience prototypes. I've also been working on personal projects, including a location-based audio chat app, as well as other iOS and hardware-related projects.

### **HUMAN-MACHINE INTERFACE ENGINEER, ASTEROID TECHNOLOGIES; SF BAY AREA – NOVEMBER 2017 - MAY 2019**

While at Asteroid, I worked to develop a macOS app for building ARKit interactions that are ready to run on iOS devices. I also researched and prototyped AR-focused features and experiments around a variety of modalities, including audio and voice, haptics, gestures, and controllers.

### **FREELANCE IOS DEVELOPER; COLUMBUS, OHIO – AUGUST 2017 - NOVEMBER 2017**

Worked with local and international startups with building new features and maintenance for their iOS apps.

### **ASSOCIATE CONSULTANT, WORKSTATE CONSULTING; COLUMBUS, OHIO – FEBRUARY 2016 - AUGUST 2017**

SportsLine by CBS Interactive: Lead developer; worked closely with designers and external stakeholders  
Also developed an iPad Pro-based kiosk app in Swift for a gov't planning agency

### **IOS/OS X DEVELOPER, SQUIRRELS LLC; NORTH CANTON, OHIO – JANUARY 2015 - JANUARY 2016**

Reflector: The core product I worked on; a wireless mirroring and streaming receiver for iOS/Android.  
Reflector Student: Co-developed in Swift from the ground up, from prototype to launch

### **RESEARCHER/DESIGNER, AIRMARKR; REMOTE – 2014**

Researcher in gestural interfaces for an early mobile augmented reality startup making movement-based

## Projects

### **SELECTED ALPHA DEVELOPER, GOOGLE PROJECT SOLI**

I was one of 80 developers worldwide to be accepted into Google ATAP's Project Soli Alpha Developer Project, and was one of 14 developers to be invited to Google HQ to workshop Soli use cases. Work published in NIME 2017 Proceedings.

### **CORE CONTRIBUTOR, AUDIOKIT**

I was a core contributor of AudioKit, an open-source audio analysis, synthesis, and processing toolkit for iOS and OS X apps. My contributions include operation defaults, presets, tests, and documentation.

## Education

**MSc Research in Music Technology, 2014** | University of York (York, UK)

Thesis: Investigating the use of multi-touch gestures in music interaction

**Audio Technology Work-Study, 2012** | The Banff Center (Banff, Canada)

**BA Music Technology, 2012** | Capital University (Columbus, Ohio)

