

## About Me

**I am a software engineer, data scientist, and creative problem solver who delivers effective solutions through careful analysis and user focused design.**

With a background in software engineering, embedded system design, and brain-computer interfaces, and a passion for audio and electronic design, I have worked with data ranging from music and speech to bio-metric and traffic.

I believe that the best solutions are achieved by always designing for the customer. Utilizing modern software technologies, data analysis, and aesthetic design, I strive for excellent communication, reliability and user experience delivery.

## Education

### M.S. Mechanical Engineering

**Colorado State University - Summer '18**

Software Engineering Thesis - Development of an Open-Source Java Library for Sensory Substitution Systems

CSU Ventures \$12,000 grant winner to complete an open source Java library for sensory substitution applications

Built an Android Library called "Tactile Waves" that provides a DSP toolbox and API for pre-processing, feature extraction, and classification of speech signals

### B.S. Mechanical Engineering

**Colorado State University - Spring '16**

Led an undergraduate mechatronics team through the design and production of a combination Attack Timer and Dynamometer to be used in any consumer vehicle

Won Design News Gadget Freak of the Year 2015 – 1<sup>st</sup> place

## Top Skills

### Software Engineering

#### Languages & Tools

Kotlin/Java, JavaScript/TypeScript, Swift, C/++, Rust  
Kotlin Multiplatform, Gradle, DSP & HPC, Firebase

#### Applications & Front End

Mobile Apps (Android, iOS, React Native)  
Web (node.js, express, React)

### Design & Production

#### Graphic/Web

3D Modeling, Animation, Generative Coding

#### Audio

Audio Production, Sound Design, Spatial/Installation

#### Manufacturing

3D Part Design, PCB Design, 3D Printing, Embedded

## Work History

### July '22 - Nov '22

#### Mobile DevEx Engineer

##### Metaplex Studios - Denver, CO (Remote)

Built and maintained mobile SDKs that interact directly with Metaplex programs on the Solana blockchain

Created critical tooling that was used for testing, CI/CD, and Kotlin code generation from protocol IDLs

Worked with community developers and projects to assess market needs and prioritize work to deliver continuous value to these users

### September '19 - July '22

#### Senior Mobile Engineer

##### Daxko - Denver, CO (Remote)

Senior engineer for SugarWOD, responsible for architecting, building, and maintaining both mobile and web applications

Built a mobile shopping experience from the ground up that generated over \$10k in revenue in its first month

Lead remote team to coach and guide junior engineers to deliver quality code adhering to our arch and coding standards

### May '18 - September '19

#### Freelance Software Engineer

##### Various Clients - Denver & Fort Collins, CO

Atlantis Aquatics - Android Developer and Software Engineer, built an Android app that interfaces with IoT devices via a RESTful API and MQTT. Worked with engineering team to optimize ESP firmware design and implement proper security measures

Rollins Consult, LLC - Data Scientist and Graphic Designer, work with traffic engineer to generate and present traffic impact data for various cities and real estate developers in Northern Colorado

Alt Ethos - Project Manager, Designer, and Hardware/Software Engineer using light, sound and creative technology to create interactive installations that generate excitement, awareness, and engagement for our customers

### July '15 - February '17

#### Software Engineer

##### Sapien, LLC - Fort Collins, CO

Lead Software Engineer at local start-up company specializing in bio-metric devices and brain-computer interfaces

Developed bio-metric monitoring systems using Java and C++

Interfaced with clients to formalize product requirements and provide project estimates

### June '15 - November '17

#### Data Analysis Contractor

##### Stantec - Denver, CO

Analyzed GPS traffic data to adjust and maintain signal timings of several streets around Denver and Greeley, CO

Built an automated Python program to analyze large sets of GPS data and generate necessary Excel summary spreadsheets