

# Matt Tytel

Oakland, CA

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## Experience

### Helm Synthesizer – Free Cross-Platform Synthesizer Plugin

Owner

Jan 2015 – Present

Developed the synth engine for Helm in C++ and implemented a flexible modulation system.  
Used JUCE to build an interactive cross-platform interface and standalone/VST/LV2/AU/AAX versions

### Leap Motion – Hand Tracking and VR Software

Apps and Tools Developer

Feb 2014 – Dec 2014

Headed and developed the Unity application 'Playground' for the Leap Motion V2 software release  
Created the 'Leap Motion V2 Skeletal Unity Assets' and many of the Unity VR and desktop examples

### Little IO – Audio Synthesis and Effects Software

Founder

Jan 2013 – Nov 2014

Cursynth – Created a GNU C++ polyphonic synthesizer that runs graphically in the terminal  
Little LFO – Designed and implemented a C++ synthesizer and utility plug-in for Reason

### Cakewalk – Music Studio Software

Contractor / Developer

Sep 2012 – Sep 2013

Wrote signal processing and UI code in C++ for the CA-2A, RE-2A, and other plug-ins  
Worked with project managers to design and implement new features for audio plug-ins

### Software Inventions – Google Chrome

Software Developer

Dec 2011 – Aug 2012

Worked on back end C++ implementations of the Chrome Extensions API  
Developed C++ and Javascript to pair Extension API calls to their back end implementations

## Education

### California Polytechnic State University

San Luis Obispo, CA

2007 – 2012

Math Major, Computer Science Minor  
Key Subjects: Algorithms, Complex Analysis, Discrete Math, Combinatorics, Number Theory

## Languages and Skills

### Preferred Languages

C++    C#/Unity    JavaScript    Python

### Skills

VR    Signal Processing    Interactive Art    UI Design

## Projects

### Cloth Simulator and Music Visualizer – C++, openFrameworks

[vimeo.com/tytel/cloth](https://vimeo.com/tytel/cloth)

an interactive physics cloth simulation where you use the Leap Motion Controller to create gravity fields

### Goldwater Dance – C++, openFrameworks

[vimeo.com/tytel/gold](https://vimeo.com/tytel/gold)

an interactive physics water simulation that translates Kinect movements into pretty waves

### Leftover Bits – SuperCollider

[tytel.org/leftoverbits](https://tytel.org/leftoverbits)

a generative music album created in a Pythagorean scale using video game synthesizers

### Lissa Juice – JavaScript, Web Audio API

[tytel.org/lissa](https://tytel.org/lissa)

Lissajous curves that you can tweak and listen to, synthesized and drawn in real time