

# BERWIN XIE

bxie6@illinois.edu | berwin.io

## EDUCATION

**UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN**

B.S., Computer Science  
Engineering James Scholar

Aug 2013 – May 2017

## EXPERIENCE

**Edward Madigan Laboratory Vodkin Lab – Software Engineer**

Designed Python and bash scripts to automate, analyze, and display data obtained from Bowtie, Bowtie2, and DESeqs runs on soybean DNA and RNA sequences. Migrated the soybean database from an older version to the latest, while running sanity checks to make sure the proposed corresponding model DNA sequences between versions were similar.

April 2014 - Present

**Chicago Chair and Stool Incorporated [eHemco] – Programmer**

Designed a shipment program pulling information from Amazon.com seller data which reduced data entry time from over 4 hours to under 10 minutes.

Summer 2013

**Test Coach Corporation – Product Tester**

Operated flying probe circuit board testers.

Sept 2011 – Apr 2012

## PROJECTS

**SIGMusic Engineering Open House**

*Tonal Starfield 2015*

Using threejs, socket.io, HTML5, ChuckK, and OSC, created a massively collaborative web interfaced tonal starfield simulation. Visitors use their mobile devices to draw pictures or write their signatures to be parsed into melodies, which are then played on the simulation instance.

*Leap Music 2014*

Worked with a Leap Motion controller to create a Human Computer Interaction demonstration using Python, PureData, Arduinos, LED lamps. The programming aspect involved physics and dynamically generated tunes from pop culture.

**Markov Music**

Built using Python and C++, converts single channel MIDI into raw data and parses that into a Markov matrix. With that matrix, using Python modules, algorithmic music is generated using the learning data that was parsed.

**Hackathons**

**WildHacks 2014**

*pyDex*: Streamlined solution for looking up Python definitions in Google Chrome.

**YHack 2014**

*art*: A Chrome extension that integrates great artworks into the daily browsing routine.

**MHacks IV**

*MHacks Music*: An interactive and collaborative public graffiti wall for music.

**HackIllinois 2014**

*Bweets by J*: A music generator using web-scraped data from Twitter queries.

**Facebook Hackathon 2013**

Built an OpenCV and Facebook powered face replacement program.

## LANGUAGES

**Technical**

Python, Javascript, JQuery, Unix-based Systems, C, C++, HTML, Mathematica

**Communicative**

English – fluent, Chinese(Mandarin) – proficient, French – intermediate