BERWIN XIE

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EDUCATION

UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN   Aug 2013 – May 2017

B.S., Computer Science
Engineering James Scholar

EXPERIENCE

Edward Madigan Laboratory Vodkin Lab – Software Engineer   April 2014 - Present

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.

Chicago Chair and Stool Incorporated [eHemco] – Programmer   Summer 2013

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

Test Coach Corporation – Product Tester   Sept 2011 – Apr 2012

Operated flying probe circuit board testers.

PROJECTS

SIGMusic Engineering Open House

Tonal Starfield 2015

Using threejs, socket.io, HTML5, ChucK, 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