

**DAZHONG JOHN XIA**

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**EXPERIENCE**

**Recurse Center**

455 Broadway, 2nd Floor  
New York, NY 10013 United States

**08/2015 - 11/2015**

**Hours per week:** 40

**Participant**

**Duties, Accomplishments and Related Skills:**

Recurse Center is a 3-month-long "programmer's retreat", where I had the opportunity to learn about any programming topics I was interested in. I spent most of my time learning Haskell, through both courses and projects.

- Completed a course on Haskell fundamentals
- Completed a course which included designing a CPU with HDL and writing an assembler, stack VM, and compiler in Haskell
- Completed several small projects in Haskell, including a compound Chinese character generator with a browser front-end
- Reimplemented core Git features (add, commit, and checkout) using Haskell

**Center For Data Intensive Science - University Of Chicago**

900 East 57th Street  
Rm 10148  
Chicago, IL 60637 United States

**04/2015 - 08/2015**

**Salary:** 30.00 USD Per Hour

**Hours per week:** 35

**Software Developer**

**Duties, Accomplishments and Related Skills:**

As a software developer I wrote tools to help scientists process large amounts of data.

- Main developer for Project Matsu, a collaboration between NASA and the Open Cloud Consortium to develop open source tools for cloud-based processing of satellite imagery
- Eased geospatial data processing by writing a Python framework to run analytic scripts with Hadoop Streaming and PySpark
- Maintained single-node installations of Hadoop and Spark on virtual machines for development
- Shared analytic results by integrating above framework with Django, PostGIS, and GeoServer

**Supervisor:** Maria Patterson (812-345-2654)

**Okay to contact this Supervisor:** Yes

**Heritage Chinese Center**

475 N Whisman Rd

Mountain View, CA 94043 United States

**06/2014 - 04/2015**

**Salary:** 60,000.00 USD Per Year

**Hours per week:** 40

**Software Developer**

**Duties, Accomplishments and Related Skills:**

As a software developer I worked on a two-person team to build a Django-based webapp to supplement a Chinese education curriculum.

- Brainstormed and tweaked game and website designs with teachers
- Used Phaser, a JavaScript game framework, to make vocabulary-building webgames
- Prototyped in-browser Chinese linguistic tone recognition with JavaScript and Web Audio API
- Installed and administered PostgreSQL database on AWS server
- Ported webapp to iOS using PhoneGap

**Supervisor:** Sushu Xia (650-283-7008)

**Okay to contact this Supervisor:** Yes

**Computational Nuclear Engineering Research Group - University of Wisconsin-Madison**

1500 Engineering Dr

Madison, WI 53706 United States

**10/2014 - 03/2015**

**Salary:** 25,000.00 USD Per Year

**Hours per week:** 20

**Associate Research Specialist**

**Duties, Accomplishments and Related Skills:**

At CNERG, I continued working with and expanding the nuclear engineering tool suite I had been working on at the University of Chicago.

- Rebuilt xsngen, an open-source nuclear cross-section library generator written in Python
- Co-evolved particle transport and transmutation to generate more accurate cross-section libraries
- Built plug-ins to integrate OpenMC, an open-source Monte Carlo particle transport code, and ORIGEN, a transmutation code, as computation backends

**Supervisor:** Anthony Scopatz (512-827-8239)

**Okay to contact this Supervisor:** Yes

**Flash Center for Computational Science - University of Chicago**

5747 S. Ellis Ave, 3rd floor

Chicago, IL 60637 United States

**10/2012 - 06/2014**

**Hours per week:** 8

**Research Assistant**

**Duties, Accomplishments and Related Skills:**

As a research assistant I mainly contributed to PyNE, an open-source nuclear engineering toolkit written mostly in Python.

- Imported PNNL materials compendium into PyNE database
- Constructed infrastructure for accessing and processing ENDF nuclear data using NumPy

- Optimized data parsing for speed using Cython
- Measured and visualized software performance using matplotlib

**Supervisor:** Anthony Scopatz (512-827-8239)

**Okay to contact this Supervisor:** Yes

### **Mission Street Manufacturing**

807 Mission St

Santa Barbara, CA 93101 United States

**06/2013 - 08/2013**

**Hours per week:** 40

**Software Intern**

#### **Duties, Accomplishments and Related Skills:**

As a software intern I worked with three other people to simplify the 3D printing process.

- Enabled children to design and print 3D models by connecting Raspberry Pi, 3D printer, iPads, and AWS server
- Coordinated server-side 3D model processing with Python, Flask, and Redis
- Wrote native iOS app in Objective-C to design 3D objects by revolving a 2D sketch
- Wrote server-side tool to extrude bitmap images into 3D models with Python and Numpy
- Prototyped constructive solid geometry rendering engine for iOS using Objective-C

### **EDUCATION**

**University of Chicago**, Chicago, IL

**BA: Physics with Honors**, June 2014

**GPA:** 3.56/4.00

### **SKILLS**

**Programming Languages:** Proficient with Python, Haskell, JavaScript, HTML5/CSS, L<sup>A</sup>T<sub>E</sub>X

**Tools:** Linux, Git, Django, Flask, Hadoop, Spark, PostgreSQL, PostGIS, AWS