Hao Xiong

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OBJECTIVE: Software developer.

EDUCATION

University of Illinois at Urbana-Champaign

(UIUC, Urbana, IL)

May 2015

Certificate of Graduate Specialization in Computer Science and Engineering

M.S. in Nuclear, Plasma and Radiological Engineering (NPRE)

GPA 3.86/4, all courses A.

Selected Courses: Scientific Visualization; Numerical Methods for PDEs.

Institute of Plasma Physics, Chinese Academy of Sciences (ASIPP, China)

June 2013

M.S. in Plasma Physics

Selected Courses: Linux System and IDL Astronomy Library.

University of Science and Technology of China

(USTC, China)

June 2010

B.S. in Applied Physics

Selected Courses: C, FORTRAN; Data Structure and Database; Algorithm.

SKILLS

- C++ (proficiency); Python (familiar); Linux and shell (proficiency); Java (experience); SQL (experience).
- Data structure and algorithms (familiar).
- HTML, CSS, JavaScript (very familiar); ¡Query, Bootstrap (familiar).
- Django (very familiar); flask (familiar).
- OpenGL, WebGL and ThreeJS (familiar).

EXPERIENCE

3D Visualization of Soil Information on LIDAR Data

2015

- Mesh reconstruction and down sampling of cloud points from Iowa LIDAR project and coordinates transformation.
- Shapefile processing of public soil data; data analysis and visualization of soil properties overlaying on top of elevation information.

Full Stack Web Application Development

2015

www.greenmoonchicago.com

- Collaborate with two other colleagues together using git and GitHub to build an attractive web site presenting data analysis of public data.
- Use Linux and Apache (web server); Flask and flask extensions (web framework); HTML, CSS, Bootstrap, Fontawesome, JavaScript, jQuery (web front end); PostgreSQL, MongoDB (database); Leaflet, Twitter API.

Graduate Research Assistant

2014 - 2015

- Developed algorithms for automated isotope identification and analyzed gamma spectra using wavelet analysis which is trained with thousands of spectra for parameter optimizations.
- Statistical analysis of uncertainty of linear regression and error propagation of singular problems.

(UIUC)

(UIUC)

(USTC)

Graduate Teaching Assistant

2013 - 2014

• Assisted Professor with homework and exam assessment in two junior-level courses: Radiation Interaction with Matter I & II, lectured exercise classes.

Graduate Research Assistant (ASIPP)

2011 - 2013

- Numerical modeling of complicated physical problems in EAST tokamak combined with scientific analysis of experimental data using large code package.
- Led a team to design and install a new diagnostic device and implemented remote data acquisition and analysis.

Lab Assistant

2009

• Numerical Modeling of the sheath structure of a hot-cathode in plasma and obtained new results which were consistent with experiments (A+ as University Research Project).