Computational Materials Group, USIT Project
Professor Dane Morgan
Materials Science and Engineering
1509 University Ave
Madison, WI 53706

http://matmodel engr.wisc.edu/research.htm#new uw.cmg hire.ht@gmail.com

Programmer – Fall 2015 -Spring 2016

The computational materials group at UW-Madison is looking for a programmer to help us realize transformative technology to enable advanced nanotechnology and materials design. Next generation nanotechnology requires the ability to determine full three-dimensional atomic structures of nanoscale materials, which structures can then be adapted to yield life changing resources ranging from solar derived fuels to clean water to new cancer treatments. You will help develop our python based Universal Structure Identification Toolkit (USIT), which integrates advanced materials simulation and numerical optimization to yield full three dimensional atomic scale structures. Your efforts will develop an open source tool and online web application to drive world-changing materials research across the globe. You will be part of a team of researchers pursuing this work, providing you a challenging and engaging learning environment.

This job requires 20 hours/week and will involve:

- Programming in Python to add functionality onto the based Universal Structure Identification Toolkit (USIT)
- Incorporating existing group code into the toolkit, in Python
- Interfacing external programs with the toolkit
- Talking with researchers about their programming needs
- Attending regular meetings

Our ideal candidate has a comfortable proficiency with the following:

- Python programming
- Basic Unix commands
- GitHub version control
- Development of web-based applications

Experience with high-performance computing clusters (MPI) or high throughput computing (Condor, Open Science Grid) is a plus.

Our ideal candidate is probably a CS graduate student, but talented graduate or undergraduate students of any year or major are encouraged to apply. Knowledge in materials science is helpful but not required.

The position will start as soon as possible and continue at least until May 2016, with some flexibility for travel or days off, and the possibility of more extended employment. Compensation will be commensurate with experience, hourly availability, and academic status, ranging for example from $12/hour without benefits to a 50% Project Assistantship (PA) with benefits and tuition remission (for graduate students).

If interested, please submit a resume, a letter of reference, and the contact information of two additional references to CMG at: uw.cmg.hire.ht@gmail.com