# DONGBO HU

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## WORK EXPERIENCE

### Senior Software Engineer                                    2014-present
Susquehanna International Group, Bala Cynwyd, PA
- Design and implement new features in C, C++ and Python for high profile middleware and monitoring systems on Linux and Windows.
- Provide software consultation and support for other technologists with respect to applications and implementations.

### Senior Application Developer                                    2011-2014
Department of Genetics, University of Pennsylvania, Philadelphia, PA
- Implemented and optimized DNA analysis algorithms in C, C++ and Perl, improved portability and scalability of existing programs.
- Designed and maintained MySQL databases that include millions of DNA sequencing records to assist with analysis of high throughput genomics datasets.
- Built user-friendly computational pipelines to process population-level variation data and explored genetic architecture of complex traits.

### Programmer/Analyst                                    2002-2011
Center for Functional Neuroimaging, University of Pennsylvania, Philadelphia, PA
- Developed open source software package VoxBo (http://www.nitrc.org/projects/voxbo/) to process and display brain imaging data.
- Converted imaging processing procedures from MATLAB to platform-independent C++ libraries.
- Designed relational database that tracked patient information and appointment schedules, implemented functionalities in C and C++ based on Berkeley DB.
- Managed distributed computational cluster that included 50+ active users, 30+ nodes and 20TB of data.

### Unix/Linux System Administrator (Part-Time)                    2001-2002
Treatment Research Center, University of Pennsylvania, Philadelphia, PA
- Built and maintained a ten-node Unix/Linux cluster.
- Installed intranet firewall to enhance network security.
- Installed and updated hardware and software on clients and server.
- Wrote shell scripts to help users automate data processing.

### Research Assistant                                    1997-2000
Department of Chemistry, University of Pennsylvania, Philadelphia, PA
- Developed state-of-the-art ultra-fast laser technology to measure time-resolved fluorescence spectroscopy of organic compounds.
- Organized group meetings in the lab and seminars in Chemistry Department.

## SKILL PROFILE
- Solid understanding of data structures and algorithms, C and C++ languages, and principles of object-oriented design and programming.

- Working experience with MATLAB, Python, Java, Perl, R, PHP, Unix shell script, and IDL.
- Expertise on Linux and Unix operating systems, working experience with Mac OS X and Microsoft Windows.
- Familiar with relational database design and management, working experience with MySQL server, Berkeley DB and SQL.
- Professional experience in version control systems and SDLC automation tools, including CVS, Subversion, Perforce, Git, Jira and Redmine.
- Outstanding analytical and interpersonal skills.

**PROFESSIONAL DEVELOPMENT**
- Received *Finance & Accounting Certificate* in 2006 from the Wharton School, University of Pennsylvania.
- Co-authored two research papers that have been published on scientific journals.

**EDUCATION**

**M.S. in Management Information Systems**, 2001, GPA: 3.9
Temple University, Philadelphia, PA

**M.S. in Chemistry**, 1996, GPA: 3.6
Institute of Chemistry, Chinese Academy of Sciences, Beijing, China

**B.S. in Chemistry**, 1993, GPA: 3.5
Shandong University, Jinan, China

**AWARDS & HONORS**
- *Dean's List Award*, 2006, University of Pennsylvania, Philadelphia, PA
- Membership of *Beta Gamma Sigma*, 2002
- *Dean's Certificate of Excellence Award*, 2002, Temple University, Philadelphia, PA