

DONGBO HU

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WORK EXPERIENCE

Senior Software Developer 2014-present

Susquehanna International Group, Bala Cynwyd, PA

- Design and implement new features in C and C++ 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 and evaluated various computational pipelines to process genomics data, including one based on Hadoop and HBase.

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 a 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 Python, Java, Perl, PHP, MATLAB, R, 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.
- Familiar with machine learning concepts and frameworks of large-scale data storage and processing, including Hadoop ecosystem, Cassandra and Spark.
- Professional experience in version control systems and SDLC automation tools, including Subversion, Perforce, CVS, 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