Zhang, Honglin

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EDUCATION

University of Pennsylvania, Philadelphia, PA

Master of Computer and Information Technology	GPA 4.00 / 4.00	May '14

Tsinghua University, Beijing, China

Bachelor of Science, Physics and Mathematics	GPA 85 / 100	July '12

RELEVANT COURSEWORK

Computer Architecture, Data Structure, Algorithms, Parallel Computing, Web Systems, Operating Systems, Numerical Analysis, Numerical Methods for ODE, PDE and SDE, Probability Theory, Statistical Physics, Computational Physics, Stochastic Process, Nonlinear Dynamics

PROJECT EXPERIENCE

- **Mini Search Engine** (on-going) A P2P implementation of a Google-like search engine with distributed, scalable crawling and indexing with ranking

- **C++ Code Analyzer** (Aug '10) A program written by a four-person group that analyzed function calls and variable references. Group leader, hands-on experience with text parsing

- **C Compiler** (Dec '12) A program converting C code to educational assembly language LC-3, with emphasis on stack, symbol table, frame pointer and stack pointer

- **RiemannCalc Package** (Dec '11) Tensor calculation by hand may take hours, while double checking the result is even longer. This is a Wolfram Mathematica symbolic computation package for Christoffel Coefficients and other quantities related to Differential Geometry and General Relativity. Reduced the computation time to seconds

- **Atmospheric Simulation on Distributed System** (May '11) First started with OpenMP in C, later rewritten with MPI. 4-dimension "matrix" (tensor) numerical calculation, 10 GB scale data management, multi-core programming experience

- **Eliza** (Oct '12) (the chatting robot) Eliza simulated a Rogerian therapist by giving reasonable responses. Object-Oriented Python development experience, string manipulation, program design

- **Snake** (Nov '12) (the classic Nokia game) The controls over speed, difficulty and the world size were provided. Observer/Observable development, MVC model, computer animation, Swing experience

PROFESSIONAL EXPERIENCE

Core Member	Computer Science Dept, University of Pennsylvania, Emacs Club	Sep '12 - Present

- Discussion about Emacs packages and Elisp
- Held tutorial sessions, *Emacs Quick Start*, *C/C++ Configuration*

Researcher	Department of Physics, Tsinghua University, Bifurcation and Noise Impact of Helium Ionization in Strong Laser Field	Sep '10 - Aug '12

- Program optimization experience with compiler and Vtune
- Proficient with probability, statistics and stochastic process simulation
- Proficient with OpenMP and MPI programming on clusters (*512 cores*)

Project Manager	Project Management Association, Tsinghua University, Project Management Theme Week	Feb '10 - July '10

- Leader in a ten-person team
- Invited Vice President of Roland Berger China, Partner *Tao Chen*, to lecture
- Responsible for opening ceremony planning, team scheduling and on-site execution

Core Member	Department of Physics, Tsinghua University, Coffee Meeting Committee	Feb '09 - Feb' 10

- Invited distinguished professors to lecture on research topics and overseas research experience for freshman and sophomores
- Poster design, site preparation and lecture coordination
- Planned Tsinghua-Peking University Physics Exchange Forum (May '09)

RELATED SKILLS

Proficient in C, Java, Emacs, LaTeX, MATLAB, Mathematica, Python, Intel Compiler, OpenMP, MPI, Git

Experience with C++, FORTRAN, SVN, assembly language, Elisp, Bash, HTML, JavaScript

Fluent in English and Mandarin Chinese, beginner in German