

Peter James Bui

CONTACT INFORMATION

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OBJECTIVE

Obtain experience and knowledge in systems programming, support product development teams, and gain corporate experience at a leading technology innovator.

EDUCATION

University of Notre Dame du Lac, Notre Dame, Indiana USA

M.S., Computer Science (Expected Completion Date: Summer 2008)
Cumulative GPA: 3.95/4.000

University of Notre Dame du Lac, Notre Dame, Indiana USA

B.S., Computer Science (Summa Cum Laude)
Cumulative GPA: 3.89/4.000
Dean's List: Fall 2002, Spring 2003, Fall 2003, Spring 2004, Fall 2004, Spring 2005, Fall 2005, Spring 2006
Outstanding Computer Science Student Award 2006

RELEVANT COURSEWORK

- **Computer Science and Engineering:** Fundamentals of Computer I and II, Artificial Intelligence, Logic Design, Computer Architecture I, Theory of Computing, Systems Programming, Operating Systems, Computer Networks, Data Structures, Algorithms, System Administration, Real-Time Systems, Compilers, Software Engineering, Graduate Operating Systems, VLSI Circuit Design, Programming Languages, Complexity and Algorithms, Advanced Computer Architecture, Computing at the Nanoscale, Introduction to Parallel Algorithms and Design, Advanced Database Projects.
- **Math:** Linear Algebra, Probability, Discrete Math.

RESEARCH AND PROFESSIONAL EXPERIENCES

University of Notre Dame du Lac, Notre Dame, Indiana USA

Graduate Research

May 2006 - Present

Worked on optimizing and speeding up an image registration program for applications requiring extremely low latency.

- Profiled image registration software to find hotspots and produced reports and analysis on timings and profile data.
- Developed a packet simulator of a hardware implementation of image registration system and generated graphs and plots of timings.
- Currently programming an image registration implementation that takes advantage of GPU-specific functions to produce significant speedup.

University of Notre Dame du Lac, Notre Dame, Indiana USA

Graduate Research

August 2007 - December 2007

Developed a MapReduce implementation that takes advantage of the parallel MPI library.

- Implemented sample benchmarks that took advantage of the MapReduce implementation and saw speedups of $2\times$ to $10\times$.

University of Notre Dame du Lac, Notre Dame, Indiana USA

Graduate Research

May 2006 - August 2006

Programmed and constructed a framework to interface with a PIM Lite fabric through a serial link.

- Wrote and debugged a series of simple benchmarks and tests to run on the PIM Lite fabric.

University of Notre Dame du Lac, Notre Dame, Indiana USA

Undergraduate Research

May 2004 - May 2006

Conducted research under the supervision of Dr. Matthias Scheutz in the fields of robotics and artificial intelligence.

- Designed and implemented a robotic voice interface using ViaVoice and Sphinx for audio input, Festival for audio output. Modified Ainebot to process the input and adjust the speed and volume of the speech output to match the affect state of the robot.
- Conducted an experiment that compared the minimax algorithm with an algorithm that took into account affect state in decision making and wrote a paper detailing the results.

Jet Propulsion Laboratory, Pasadena, California USA

Summer Internship

May 2005 - January 2006

In charge of porting a compiler to the PIM Lite architecture as well as work with a partner in producing a prototype system platform.

- Authored and drafted the PIM Lite functional specifications and platform user's manual.
- Facilitated development of a prototype compiler and related system tools such as a simulator and assembler for the PIM Lite architecture.

ACADEMIC AND
WORK
EXPERIENCES

University of Notre Dame du Lac, Notre Dame, Indiana USA

Teaching Assistant

January 2008 - Present

Assisted Dr. Jay Brockman in CSE 20221 Logic Design course.

- Graded homework and laboratory assignments.
- Supported students in use of Xilinx ISE software and use of Basys FPGA boards.

Teaching Assistant

August 2007 - December 2007

Assisted Dr. Sharon Hu in CSE 30331 Computer Architecture I course.

- Developed and graded homework and laboratory assignments.
- Programmed a simple assembler and simulator of small processor system for use in laboratory assignments.

Computer Cluster Consultant

August 2004 - May 2006

Maintain and help users in the engineering computer cluster headed by Paul Go.

- Assisted students and faculty in the use of the Redhat Linux workstations and helped maintain the printers and other hardware devices. Developed a few shell scripts to help with administration and installed software.

Teaching Assistant

January 2005 - January 2006

Assisted Dr. Jesus Izaguirre in the CSE 212 Fundamentals of Computing II course and the CSE 30331 Data Structures.

- Designed lab and homework assignments such as a graphical battleship game. Taught and helped the students design graphical user interfaces using the Gtkmm toolkit.

Teaching Assistant

August 2004 - December 2004

Assisted Dr. Matthias Scheutz in the CSE 211 Fundamentals of Computing I course.

- Graded assignments and provided office hours to help students understand the course material.

ACTIVITIES

Notre Dame Linux User Group

August 2004 - August 2006

Organized meetings and events for the university's Linux Users Group.

- Planned and directed the first annual NDLUG Installfest where students could join together and

- help others install and use Linux.
- Aided students with troubleshooting various Linux and related computer problems.

Robinson Learning Center

January 2004 - May 2004

Read to underprivileged children and helped with homework assignments.

- Assisted a child in learning how to read and basic math skills.
- Maintained the center's collection of Macintosh and Windows computers and assisted children in the use of various software packages.

RELEVANT SKILLS

- Programming Languages: Assembly, C/C++, (Chicken, Gauche, PLT) Scheme, JAVA, shell(csh/ksh/sh), Ruby, Perl, Python.
- Operating Systems: Windows (2000, XP, Vista), (Free, Net)BSD, (Arch, RedHat, Ubuntu) Linux