

# Peter Zhang

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## EDUCATION

**Carnegie Mellon University**, Pittsburgh, Pennsylvania  
M.S. in Electrical and Computer Engineering, December 2004  
GPA: 4.0/4.0  
B.S. in Electrical and Computer Engineering, May 2004  
GPA: 3.5/4.0 - University Honors

## EXPERIENCE

### **GE Transportation Systems: Global Signaling** (June – September 2004)

Information Management Leadership Program Intern

- Led dashboard project utilizing ASP, SQL & ChartFX resulting in \$1.4MM cost savings.
- Championed IT projects: hammered requirements with functional team, planned project schedules, worked with development, testing & documentation engineers and gained team management experience.

### **Advanced Micro Devices: Software Research & Development** (January – May 2003)

System Software Developer Co-op

- Developed a general Legacy Southbridge diagnostic for K8 processor platforms using C & ASM.
- Created client/server API interfaces for platform characterization suite in C/C++.

### **Carnegie Mellon: Robotics Institute** (April – December 2002)

Research Assistant

- Designed and prototyped commercially available embedded system. Project encompassed scoping, design, schematic, layout, microcontroller programming, debugging, documentation and user testing.
- Developed embedded components of Personal Rover Project & robot hardware for Smithsonian Museum.

## ACADEMIC PROJECTS

### **Computer Architecture Project – Cache Exploration and Implementation**

- Created C cache simulator to decide on an optimal cache structure for best processor performance.
- Implemented the optimal Instruction and Data Caches in Verilog, debugged and completed synthesis.

### **Digital Design Project – Real-Time Hardware Face-Recognition System for Automotive Entry**

- Developed hardware to implement face recognition on a System on a Chip in 4 member team.
- Implemented all algorithms and peripheral components into hardware – won International competition.

### **Digital Circuit Design Project – 8-bit ALU Design**

- Designed and Simulated 16 Instruction, 2000+ transistor ALU from transistor level.
- Utilized logic design, Verilog verification, SPICE verification and Cadence Virtuoso Suite.

### **Mechatronic Design Project – Autonomous MEMS Chip Placement**

- Designed and created robotic system capable of picking and placing MEMS silicon die autonomously.
- Led electronics group - Used PIC embedded controllers and numerous sensors; learned system design.

## SKILLS

- Languages: C/C++, Java, Verilog, VHDL, VB, ASM, Basic, ASP, PHP, SQL, HTML, Matlab
- Focus Areas: Computer Architecture, Embedded & SoC Design, Robotics

## AWARDS & HONORS

- 3<sup>rd</sup> Place – IEEE 4<sup>th</sup> Annual Student Design Contest held at RIT, 2004 (International)
- 3<sup>rd</sup> Place – Ford Motor Company Undergraduate Research Award, 2004
- 1<sup>st</sup> Place – Carnegie Mellon General Robotics Urban Search & Rescue Competition, 2002
- 2<sup>nd</sup> Place – Carnegie Mellon Mobot Slalom Race (outdoor line-following robot competition), 2002
- 2<sup>nd</sup> Place – Fundamentals of Electrical Engineering eMuse Competition, 2001
- Deans List in Electrical & Computer Engineering, 2002 – 2004
- 800 SAT Math Score, 5 AP Calculus, 15<sup>th</sup> Individual at U.S.C. Math Competition 2000