WING-HONG ANDREW KO

1728 Wightman St
Pittsburgh, PA 15217
wko2@andrew.cmu.edu

United States Citizen
(717) 507-0352

EDUCATION

Carnegie Mellon University, **School of Computer Science,** Pittsburgh, PA

- Pursuing M.S. in Very Large Information Systems **December 2010 GPA 3.66**
  - Spring 2010 – Information Retrieval, Web Applications, Machine Learning

Carnegie Mellon University, **School of Computer Science,** Pittsburgh, PA

- Obtained B.S. in Computer Science, B.S. in Discrete Mathematics and Logic **December 2009 GPA 3.73**
  - Fall 2009 – Software Engineering, Very Large Info Systems, Topology
  - Spring 2009 - Networks, Parallel Computing
  - Fall 2008 – Operating Systems, Machine Learning, Math Logic I, Number Theory
  - Spring 2008 – Real Analysis II, Field Theory, Graph Theory
  - Fall 2007 – Real Analysis, Algebraic Structures
  - Spring 2007 – Combinatorics

WORK/RESEARCH EXPERIENCE

Carnegie Mellon University, *Teaching Assistant*, Pittsburgh, PA August 2010 – current

- Graduate course in Very Large Information Systems

Microsoft, *SDE Intern*, Redmond, WA May 2010 – August 2010

- Developer in Office Solutions Framework team under Office
  - Synchronized lists to services from Excel using the OData Protocol
  - Trained for and used Scenario Focused Engineering practices

Host Interactive Protein Research Project, *Research Assistant*, Pittsburgh, PA January 2009 – May 2010

- Applied machine learning techniques to classify ORFs from unknown viral genomes, under Professor Ronald Rosenfeld
  - Used belief propagation on graphical models with a variety of node and edge features to determine whether an ORF encodes a Host Interactive Protein
  - Automated the data retrieval, organization, and algorithm execution steps

Pittsburgh Science of Learning, *Intern*, Pittsburgh, PA May 2007 – May 2009

- Worked on implementing several features to improve the Cognitive Tutoring Authoring Tools (CTAT) system (Summer 08)
  - Integrated a virtual chemistry laboratory program, VLAB, with the CTAT intelligent tutoring system
  - Wrote a robust service forwarding TCP and HTTP connections to different locations
  - Rewrote matcher system, including GUI and algorithm, by which CTAT recognizes student performed steps
  - Made improvements to CTAT, ensuring robustness for the IES online tutoring program in-use by thousands of students
- Designed and executed "Improving Intelligent Tutor Authoring Tools: Integrating CL and CTAT" project under the direction of Dr. Vincent Aleven and Project Advisor Jonathan Sewall (Summer 07)
  - Integrated two intelligent tutoring systems, a curriculum-based application created by Carnegie Learning in-use by students in classrooms, and the flexible CTAT used for psychology studies
  - Wrote and tested a GUI system for users of the integrated system

Intel First Year Research Experience, *Research Assistant*, Pittsburgh PA September 2006 – December 2007

- Contributed to "Project AURA**:** Distraction-Free Pervasive Computing," directed by Professor Peter Steenkiste
  - Added features to a path-giving application such as visibility of doors and hint-giving instructions
  - Gained experience with communication between multiple applications, data retrieval from a database

OTHER PROJECTS

- MIT Battlecode competition, applying software engineering to a robot simulation problem space
- Movie review clustering using K-means and SVM
- OS kernel project, implemented zero-fill-on-demand, bounded waiting mutexes, paging structures in user space

SKILLS

- Languages: C, Java, C#, Assembly, PostgreSQL, Python, SML/NJ, OCaml, Perl