

# ANDREW HARP      Artificial Intelligence + Machine Learning

## Work Experience

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**GOOGLE**    *Software Engineering Internship*                      *January 2008 – June 2008*                      *Mountain View, CA*

- Developed and launched a machine learning project for use by teams across the company.
- Coded in C++, Python and Java as needed, using Google's protocol buffers for interoperability.
- Attained Google readability status for C++, signifying proficiency in writing clean, understandable code.
- Utilized Google's parallel data-processing infrastructure to handle large volumes of training data.

**WORLDFAMILIES**    *Web Development Consultant*                      *June 2007 – August 2007*                      *Atlanta, GA*

- Used Drupal to rebuild existing collection of 1500 static genealogy project management sites into a fully-integrated, dynamic website.
- Integrated multiple technologies such as content management with forum software.
- Performed all custom HTML/CSS design, PHP coding, data migration and database setup.

**MIDWAY**    *Artificial Intelligence Software Engineer*                      *February 2004 – April 2007*                      *Austin, TX*

- Designed and implemented navigation mesh editor used for multiple games across company, integrated into the Unreal Editor, enabling designers to quickly mark up navigable regions in game maps. Developed intuitive user-interface code that handled the efficient manipulation of geometric data structures representing mesh.
- Xbox360 and PS3 title *Area 51: Blacksite*
  - Developed character AI systems and scripts for controlling character actions in C++.
  - Created a locomotion solution for smoothly animating characters through all possible actions, using a combination of code and editor created state-machines.
  - Worked directly with designers and artists on a daily basis to create technical solutions that efficiently met their needs.
- PS2 and Xbox title *Area 51*
  - Worked on efficient networking code for the multiplayer game.
  - Handled on-screen Head-Up-Display and some graphical effects.

**IBM**    *Software Engineer*                      *September 2003 – January 2004*                      *San Jose, CA*

- Worked with DB2 development team testing enterprise applications in C++ and Java.
- Created test framework for benchmarking various operations in Java and C++.

**IBM**    *Extreme Blue Intern*                      *June 2002 – August 2002*                      *Boston, MA*

- Prototyped a collaborative e-mail component in IBM's exclusive internship program, using the Websphere environment .

**ENKIA CORP**    *Software Intern*                      *May 2000 – August 2000*                      *Atlanta, GA*

- Coded PHP, HTML, and Java in a small start-up environment.
- Worked with graphic designer to create working demo site for search engine prototype.
- Developed simple company intranet using PHP and MySQL.

## Education

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**University of Texas at Austin**      *M.S. in Computer Science*      *January 2007 - May 2009*  
3.72 GPA

Classes:

Knowledge Representation and Reasoning, Autonomous Robotics, Data Mining, Computational Linguistics I & II, Cognitive Science, Machine Learning, Computer Vision, Visual Recognition and Search, Computational Statistics, Wireless Networking, Theory of Computation

**Georgia Institute of Technology**      *B.S. in Computer Science*      *August 1999 - May 2003*

Finalist Game, Student Showcase, Independent Games Festival at GDC      *Spring 2003*

Chairman, Association of Computing Machinery      *Fall 2001 - Spring 2002*

ACM Southeastern Programming Competition

- 3rd place team      *Fall 2001*
- Honorable Mention      *Spring 2001*
- 4th place team      *Fall 2000*

## Skill and Technologies

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**Areas** Artificial Intelligence, Machine Learning, Computer Vision, Computer Graphics, Computer Animation, Network Programming, Object Oriented Design, Web Development, Database Design, Simulations

**Languages** C++, C, Python, Java, Matlab, PHP, Lisp, HTML, SQL, XML,

**Technologies** Linux, Windows, Direct3d, OpenGL, Unreal Engine, Console Development, Drupal

## Other Interests

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Ultimate Frisbee, Rock Climbing, Running, Reading, Traveling