Hassaan Markhiani

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Education

University of Texas, Austin, TX — Expected May 2013
Master of Science (in progress): Computer Science
Bachelor of Science: Computer Science, Mathematics (Scientific Calculations)
Graduate GPA: 3.67 / 4.00
Undergraduate GPA: 3.51 / 4.00

Work Experience

Zynga, Internship with The Ville Team - Summer 2012
Worked on multiple projects, including building developer tools, debugging issues within the game, and finding ways to catch cheaters, to assist the team with the launch and upkeep of the game.

Microsoft, Internship with the Bing Maps Team - Summer 2011
Worked on two projects with the Image Delivery Team. First project involved querying a database for statistics and plugging in component into an internal tool. Second project required normalizing incoming requests to improve cache performance.

Apple, Internship with the Management & Collaboration Team (Mac OSX Server) - Summer 2010
Worked on a project that required Client/Server communication, shell scripting, data collecting, and a GUI. Wrote most code in Objective-C for handling the data collection and GUI. Used sockets in C to accomplish Client/Server communication. Applied a bracketing algorithm over the data set to achieve optimization.

Relevant Coursework

Autonomous Robots	Computer Graphics	Concepts of Info Retrieval
Formal Semantics & Verification	Game Technology	Mobile Computing
Machine Learning	Neural Networks	Programming Languages

Programming Languages

C	C#	C++
Java	Matlab	Objective-C
PHP	Python	Ruby (on Rails)

Coding Experience

Fluid Simulation (C++ – Class Project)
Simulated 2D water using a particle system approach with hydrodynamic equations. Also implemented meta-balls to better simulate and replicate the fluid motion of water.
Particles: http://www.youtube.com/watch?v=Tq-aca8nU3c Meta-balls: http://www.youtube.com/watch?v=6VuFd_-uGYc

Classifying Hand Written Digits (Matlab – Class Project)
Implemented Principal Components Analysis (PCA) to read hand written digits. Used training samples to determine eigendigits, which were used to classify digits.

Autonomous Robot (C++ – Class Project)
Made Sony Aibo robots interact with a ball. Used robot's camera to find a ball and then approach the ball using PID controller. Also used Kalman Filter to track ball's position and velocity. Worked with Aldebaran Nao robot, as well. Used a particle filter to detect beacons on a field to localize the robot.

Math Alarm (Java – Personal Project)
Developed the basic implementation of an Android alarm app for Yahoo's Hack U event. Alarm used Google's text to speech API to ask the user simple, random arithmetic questions and used Google's speech to text API to get user's answers. Users must answer questions correctly to turn off the alarm.

Squibble (C#/Java - Personal Project)
Developed a simple pictionary game for Windows Phone 7 during Microsoft's Big App On Campus 12-hour hackathon. Application was made in C# and communicated with the Java server via TCP connections.

Poker Screen Scraper (C++ - Personal Project)
Scraped screen to determine board and hole cards. Made to be part of larger poker bot project.

Scramble Your Friends (Objective-C – Personal Project)
An iOS game with turn based gameplay. Game uses a backend database to allow players to play against one another. Gameplay revolves around selecting the best word on a scramble-like game board. Game currently has over 175,000 users worldwide.