Waseem Ahmad

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Education

Rice University (2010 – 2014)
Houston, TX
Bachelors in Computer Science
GPA: 3.95

University College London (Spring 2013)
London, UK
Study Abroad / Computer Science

Technical Skills

Proficient in **Python**, **Java, Objective C, PHP**
Comfortable with **C, HTML, CSS, JavaScript (Closure, jQuery, CoffeeScript)**
Comfortable using **Windows**, **Mac OS X**, **Linux**
Experience using Content Management Systems (CMS), **Joomla, WordPress, Xoops**

Work Experience

Software Engineer Intern – Facebook **Summer 2013**
Team: Payments Platform

Software Engineer Intern – Google **Summer 2012**
Team: QPX™ – Travel Search

- Designed and deployed QPX dashboard, which integrates and consolidates data from test systems into a user friendly and interactive report.
- Used Python (Google App Engine), JavaScript (Closure), CSS, and HTML for development.
- Optimized and parallelized QPX testing server startup scripts, speedup greater than 2x achieved.

Teaching Assistant – Rice University **Fall 2011**
Department: Computer Science

- Teaching assistant for freshmen computer science introductory course, COMP 140 – Computational Thinking.
- Assisted students with programming and problem solving during weekly labs and homework help sessions.
- Graded homework assignments and lead one-on-one personal mentoring sessions.

Aerospace Engineering and Robotics Intern – Auburn University **Summer 2011**
Program: Research on Smart Unmanned Aerial Vehicles (UAVs / Drones)

- Worked on a team of 4 to develop a framework to autonomously fly six to twelve UAVs in a limited air space to deliver different kinds of missions using a X-Bee based software in Robot Operating System (ROS).
- Wrote an implementation to minimize flight time and optimize path for collision avoidance in a cooperative manner using Mixed Integer Linear Programming framework (*Gurobi*) in Python.
- Wrote a research paper on our findings and optimization techniques.
- See team website at pfduav.com.

Relevant Coursework

COMP 450: Algorithmic Robotics	Fall 2012	**COMP 215: Program Design**	Fall 2011
COMP 310: Advanced OO Programming	Fall 2012	**ELEC 220: Computer Engineering**	Spring 2011
MATH 355: Linear Algebra	Fall 2012	**COMP 182: Algorithmic Thinking**	Spring 2011
COMP 322: Parallel Programming	Spring 2012	**MATH 212: Multivariable Calculus**	Spring 2011
COMP 221: Computer Systems	Spring 2012	**COMP 140: Computational Thinking**	Fall 2010
STAT 310: Probability and Statistics	Spring 2012	**ECON 205: Game Theory**	Fall 2010
BUSI 296: Business Communications	Spring 2012	**MATH 211: Differential Equations**	Fall 2010
COMP 446: Mobile Device Applications	Fall 2011		

Publications

Collision Avoidance Techniques on Unmanned Aerial Vehicles (pending) **Fall 2011**
Journal of Aerospace Computing, Information and Communication

Project Experience

Web Application: owlection.appspot.com *(Google App Engine)* **Spring 2013**
- Voluntarily developed a platform for holding online elections for student organizations within Rice.
- Designed an intuitive interface for creating elections with most popular voting systems and integrated authentication with university's login system.
- Held elections for 9 different student organizations and counted over 1400 votes.

Web Development: brown.rice.edu *(Joomla CMS)* **Spring 2012**
- Fully developed an interactive website for members using Joomla (CMS).
- Integrated numerous features and pages including news, calendar, events, and photo gallery and information pages.

Document Indexing System with Machine Learning *(Java)* **Fall 2011**
- Using object-oriented design and test-driven development *(J-Unit)*, fully constructed a functional document indexing and retrieval system.
- Utilizes a statistical machine learning model called **Latent Dirichlet Allocation** to index a corpus of documents to associate them with topic keywords.
- Allows the user to perform queries on selected text or entire documents to find documents from the indexed corpus that have the closest matching topics.

iPhone Application: iStudy *(Objective-C)* **Fall 2011**
- Created a utility iPhone application that allows users to manage and organize their college course tasks and assignments.
- Allows the user to create multiple courses and download the .pdf syllabus of the course into the application, create task checklists such as assignments, tests, quizzes and set deadlines.
- Lets users write emails within the application to professors or teaching assistants by allowing them to create contacts for each course.

Pacman Gaming Agent with Artificial Intelligence *(Python)* **Fall 2010**
- Programmed an artificial intelligence agent to play Pacman in a competitive manner.
- Optimized strategy and decision making through various conditions of the game.
- Developed a look-ahead agent to consider several moves into the future.

Campus/Community Activities & Awards

President **2013 – 2014**
Rice University Computer Science Club

Vice President **2012 – 2013**
Rice University Computer Science Club

Google Campus Ambassador **2012 – 2013**
Rice University

Lead Organizer **Spring 2012**
Hack Rice: Organized First Hackathon ever at Rice