

# ANANYA ACHARYA

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## ABOUT

Multi-faceted and an efficient professional with a diverse skill set and experience encompassing web development, software development and server administration. Seeking a full-time opportunity as a computer science engineer.

## ACADEMIC PROJECTS

### SCALABLE NETWORKED GAMES INFRASTRUCTURE USING ELASTIC CLOUD COMPUTE (Directed Research Project - Fall 2015)

Infrastructure that allows processing of realtime scientific computations from large scale multiplayer MMORTS game on cloud platforms. Working on implementing path finding algorithm for N-Body simulation using OpenCL kernel to split computation across node servers. Results - Simulations on low-end smartphones are 2.5x faster than Core i7.

### INFORMATION RETRIEVAL & SEARCH ENGINES – NASA POLAR DATASET (Spring 2015)

Crawled three polar and arctic data repositories using Apache Nutch and Tika. Built two URL filter plugins for Nutch to perform deduplication while crawling. Designed and implemented content-based and link-based ranking algorithms on the indexed data using Solr and Lucene. Constructed Polar data visualization using D3.js and Banana Analytics.  
[youtube.com/watch?v=ao6v5QQsFFY](https://www.youtube.com/watch?v=ao6v5QQsFFY)

### ARTIFICIAL INTELLIGENCE – REVERSI GAME (Fall 2014)

Program that determines the best possible move for a player using adversarial search algorithms with positional weight evaluation functions.

### 3D GRAPHICS – SCREEN SPACE AMBIENT OCCLUSION (Fall 2014)

Extended GzLibrary to implement real-time screen space ambient occlusion, a technique developed for the 2007 video game Crysis, using the depth buffer. This improved rendering frame rate by 30%.

### FINANCE STOCK SEARCH APPLICATION (Spring 2014)

Developed a HTML5 web app and android application using Ajax to interact with Java servlet (on Amazon AWS). Used Yahoo finance API and incorporated Facebook JavaScript SDK for 'share' feature.

## EDUCATION

- 2014 - NOW  
**MASTER OF SCIENCE - Computer Science**  
(Expected graduation - Dec 2015)  
**University of Southern California**  
Los Angeles, California 90089  
GPA: 3.54  
Courses: Analysis of Algorithms, Web Technologies, 3D Graphics & Rendering, Artificial Intelligence, Operating Systems, Information Retrieval & Search Engines.
- 2007 - 2011  
**BACHELOR OF ENGINEERING - Information Science and Engineering**  
**Visvesvaraya Technological University**  
Karnataka, India 590014  
Grade: First class with distinction  
Project: Job scheduling in a grid computing environment

## EXPERIENCE

- 2014 - NOW  
**GRADUATE ASSISTANT - The Graduate School Office of the Provost, USC**  
Web Developer and Server Administrator. Integrated SpreadJS into PhD Processing web application, providing javascript control to the existing ASP.NET MVC5 application. Built Fellowship Travel grant processing web application. Planned and implemented migration of USC Graduate School physical server infrastructure to virtual environment.
- 2011 - 2013  
**ASSOCIATE SOFTWARE ENGINEER - CSC Computer Sciences Corporation India Pvt Ltd**  
Application development and application patching. Worked on building updates for the existing RioTinto operations application. Developed scripts to automate deployment and installation of patches and updates. Also worked for the server infrastructure ops team.

## ACHIEVEMENTS

- AUG 2012  
**RECOGNITION OF LEADERSHIP AWARD**  
RioTinto Wintel Team  
Development of application patches.
- JAN 2012  
**RECOGNITION OF OUTSTANDING WORK AND INNOVATION**  
Automation server-infrastructure operation

## SKILLS

C, C++

JAVASCRIPT

JAVA, SQL

HTML, CSS