

# Hardik Goel

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<https://github.com/goelhardik/>

## EDUCATION

### UNIVERSITY OF MINNESOTA | MS IN COMPUTER SCIENCE

Expected May 2017 | Twin-Cities, MN

- GPA: 4.0 / 4.0
- Teaching Assistant for undergrad Operating Systems.

**Courses:** Advanced Algorithms and Data Structures, Matrix Theory, Artificial Intelligence I & II, Intro to Compilers

### INDIAN INSTITUTE OF TECHNOLOGY, ROORKEE | BTech IN ELECTRONICS & COMMUNICATION ENGG.

May 2011 | Roorkee, India

- GPA: 7.6 / 10.0

**Courses:** Data Structures and Algorithms, Mathematics, Computer Networks, Computer Architecture, Database Management

## EXPERIENCE

### CISCO SYSTEMS | SOFTWARE ENGINEER

July 2011 – August 2015 | Bangalore, India

- Worked as a firmware engineer on an I/O Virtualized, Converged Network Adapter, which is part of a Data Center solution - UCS (Unified Compute Servers).
- Worked on iSCSI boot, allowing servers to remotely boot from a central NetApp/EMC storage array. Resolved timing issues to fix Linux crashes and added support for booting multiple hosts.
- Worked on board bring-up for new network adapters, programming new chips and adding new network speeds.
- Created a tool in python for debugging of adapter issues. The tool accepted XML file with commands and generated results using expect scripts.
- Worked on the re-factoring of CLI based tool for configuration of the adapter from the UCS Manager over the network. This also enabled multi-host configuration on the adapter.

## PROJECTS

### OTHELLO BOT | December 2015

Developed an AI to play the game of Othello. Implemented adversary search algorithms such as Minimax and Alpha-Beta Pruning, along with a lot of heuristic based scoring, specific to Othello.

Also made a simple **Tic Tac Toe** game for humans to play against an unbeatable bot.

• Python • HTML • CSS • Javascript • Flask •

### OPTICAL CHARACTER RECOGNITION FOR HANDWRITTEN HINDI SCRIPT | Jan 2011 – May 2011

Worked in a team of three to develop a complete Optical Character Recognition system for handwritten Hindi script. This involved the use of techniques of image enhancement, segmentation and feature extraction (adapted to work best for Hindi text). Used Zernike Moments and Center of Mass as features for a static database.

• MATLAB •

## SKILLS

### PROGRAMMING

Comfortable:  
Python, C, Matlab

Rusty/Familiar:  
Shell, Javascript, CSS, HTML, Lisp,  $\LaTeX$

## AWARDS

- Cisco Achievement Program (CAP) award (2x) for identifying and handling release-critical issues.
- All India Rank 997 in IIT-JEE 2007 (Joint Entrance Examination) among 300,000 candidates.