Aman Goel

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EDUCATION

IIT BOMBAY
B.Tech, Computer Science and Engineering
Mumbai, India
CPI: 9.4 / 10.0

COURSEWORK

CS RELATED
Artificial Intelligence (+Lab)*
Computer Architecture (+Lab)*
Database and Information Systems (+Lab)*
Design and Analysis of Algorithms
Data Structures and Algorithms (+Lab)
Discrete Structures
Computer Networks (+Lab)
Digital Logic Design (+Lab)
Logic for Computer Science
Data Analysis and Interpretation
Software Systems Lab
Abstractions and Paradigms for Programming (+Lab)
Computer Programming and Utilization

STATISTICS RELATED
Statistical Inference*
Introduction to Probability Theory
Introduction to Derivative Pricing

* ongoing course

SKILLS

Proficient:
C++ • Java • Python
Matlab • GNU Octave • SciLab
HTML • CSS
Familiar:
Django • JavaScript • Android
Bash Scripting • LaTeX

INTERESTS

Competitive Programming • Statistics
Algorithms and Data Structures
Machine Learning • Mathematics
Android App Development
Web Development

OTHER EXPERIENCES

Teaching Assistant • Blogger
Department Academic Mentor

PROJECTS AND INTERNSHIP EXPERIENCE

TU BRAUNSCHWEIG | Research Intern (Summer 2015)
- Studied the problem of minimizing the number of robots (with a limited communication range) to cover a given area
- Studied the problem of maximizing the covered area, given a limited number of robots with a limited communication range
- Studied and implemented fast algorithms for finding the convex hull of a given set of points (Chan's algorithm)

BLOG ANDROID APP | Self Project (Summer 2015)
- Used the Blogger API to program an android application for my blog using android studio (Github Repository)
- Implemented refresh mechanism to fetch latest articles

UART | Prof. Ashutosh Trivedi (Spring 2015)
- Coded a Universal Asynchronous Receiver and Transmitter (UART) in VHDL (Github Repository)
- Frame by frame data transfer across FPGA and Computer

DJANGO WEB APPLICATION | Prof. S. Chandran (Autumn 2014)
- Studied and implemented Gale Shapley algorithm in Java to solve a seat allocation problem
- Developed an associated Django web application

COUNTRY IDENTIFICATION MODULE | Prof. G. Ramakrishnan (Autumn 2014)
- Programmed a Python module to process pure English sentences and make statistically useful conclusions (Github Repository)

RUBE GOLDBERG MACHINE | Prof. S. Chandran (Autumn 2014)
- Implemented simulation of a Rube Goldberg Machine in C++ using Box2D Physics simulation engine (Github Repository)

TETRIS | Prof. RK Joshi (Spring 2013)
- Coded Tetris game in C++ using the cross platform graphics library - Fast Light Took Kit (FLTK)

TANK SHOOTING GAME | Prof. S. Biswas (Spring 2013)
- Coded a tank shooting game in C++ using simplecpp library

AWARDS

Year	Rank	Award
2014	Top 10/900	Institute Academic Award
2013	Top 10/900	AP grade in all 3 Mathematics courses
2013	Top 8/500	AP grade in Engg Drawing and Chemistry
2013	33rd/0.15 million	JEE Advanced 2013
2013	617th/1.5 million	JEE Main 2013
2013	Top 35/40,000	Indian National Physics Olympiad (INPhO)
2013	Top 35/40,000	Indian National Chemistry Olympiad (INChO)
2013	113rd/0.1 million	KVPY
2013	Top 0.1 percent	CBSE Certificate of Merit