# Satwant RANA

# PERSONAL DATA

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# **EDUCATION**

JULY 2012 Integrated M.Tech in MATHEMATICS AND COMPUTING

Indian Institute of Technology, Delhi

JULY 2017 GPA: 8.6/10.0

# **RELEVANT COURSES**

MATHEMATICS: Combinatorics, Discrete Maths, Modern Algebra, Optimisation,

Numerical Methods, Linear Algebra, Analysis, Probability and Stochastic Processes, Calculus.

COMPUTER SCIENCE: Algorithms, Data Structures, Computer Architecture,

Operating Systems, Natural Language Processing, Neural Networks

ELECTRICAL: Digital Design, Signal and Systems

OTHER: Econometrics

ONLINE: Machine Learning, Probabilistic Graphical Models

# **PROJECTS**

### PRESENT MAY 2014

# The Next Generation of Open Information Extraction

The project aims at creating the next generation of Open Information Extraction, a paradigm of IE aimed at extracting arbitrary relations. The main aims of the project are increasing precision and recall of the current version of OpenIE, in the domains of list extraction, semantics of conjunctions and numeral understanding

# Present

### Tweet Tokeniser

#### FALL 2014

The project aims at creating a tokeniser for tweets, segmenting tweet sentences into invidual tokens of words or entities. As an additional feature the tokeniser will normalise dates in the sentences as well.

#### **SPRING 2013**

# A data structure for company hierarchy

Implemented a Data Structure for storing Hierarchical Structure of a Company, with the features of quickly adding, deleting, and printing employees; along with an additional feature of finding the Lowest Common Ancestor of two employees. Implemented an AVL Tree for logarithmic time queries in the data structure.

### FALL 2012

# DFS using higher order functional programming

Used higher order functions in Standard ML to implement a functional algorithm for Depth First Search. Implemented functional algorithms for Subset Sum problem, Knight's Tour problem and Stable Marriage problem using the higher order Depth First Search function.

# AWARDS AND HONOURS

2012 9th at ACM-ICPC Asian Regionals

2012 Attended Indian Training Camp for IOI

- 2012 AIR 817 in IIT JEE
- 2012 AIR 85 in AIEEE
- 2012 Became KVPY fellow
- 2011 Rank 1 in RMO, Delhi region
- 2011 National Top 1 percentile award in NSEP and NSEA in 2012
- 2010 Qualified NSEJS and NSEA Jr. in 2010

# **SPORT PROGRAMMING**

Codechef: satwantrana, currently ranked 307 in short contests

Codeforces: satwant, blue rated
Topcoder: satwant123, blue rated

Awards: 3rd in ACM-APC Asian Programming Contest conducted by IIT Delhi

9th and 30th in ACM-ICPC Asian Regionals 2012 and 2013 resp.

# **TECHNICAL SKILLS**

Languages: C++, JAVA, PYTHON, C, SML-NJ, PHP, HTML, CSS, JS

Softwares/Tools: DJANGO, web2py, ubuntu, LTFX

# INTERESTS AND ACTIVITIES

Algorithms, Al, ML, Discrete Maths, Competitive Programming, Football, Movies, Travelling