

# HAROUN HABEEB

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## EDUCATION

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**Indian Institute of Technology, Delhi** 2017  
B. Tech in Computer Science and Engineering (Concentration in Artificial Intelligence) GPA: 9.15/10  
Ranked 1<sup>st</sup> and 3<sup>rd</sup> in the department in the last 2 semesters

## RESEARCH EXPERIENCE

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**Using Symmetries in PGMs to reduce computation in MAP inference** 2016  
*Under supervision of Dr. Mausam and Dr. Parag Singla, Dept. of CSE, IIT Delhi*

- Created notions of symmetry to achieve speedups in MAP inference on MRF

## INTERNSHIPS

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**Summer Analyst, Deutsche Bank Centre, Mumbai** Summer 2016

- Analysed behavior of correlation between asynchronous equities using SVMs, regression.
- Developed backtesting tools for asynchronous correlation based instruments.

## SCHOLASTIC ACHIEVEMENTS

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- Received **Merit Scholarship** for Top 7% GPA in a class of 100 for 2 semesters 2016
- Received **Summer Undergraduate Research Award** for Point Location in 3D Subdivisions. 2015
- Secured **All India Rank 61** among 1,400,000 students in the Joint Entrance Exam, IIT-JEE 2013
- Received **Gold Medal** and Certificate of Merit (top 35) at INPhO, National Olympiad 2012
- Received KVPY Fellowship and NTSE Scholarship from Govt. of India 2011, 2009

## TECHNICAL PROJECTS

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**Currency Note Identification** ([link](#), course project) Fall 2016

- Implemented LDKL for classifying notes from photos and studied model compression.

**Implementing Virtualization in JOS** ([link](#), course project) Spring 2016

- Implemented hardware virtualization for 64 bit MIT-JOS written in C, tested using bochs.
- Virtualization using Intel VT-x through VMCS with Extended Page Table support.

**Parallelized Sudoku Solver** ([link](#), course project) Spring 2016

- Implemented parallelized versions of brute force solver, A\* search using C, OpenMP.

**Game Playing AI - Quoridor** ([link](#), course project) Spring 2015

- Implemented a Quoridor player in C++ which uses MCTS and RL.

**3D Peer to Peer Multiplayer Game** ([link](#), course project) Spring 2015

- Developed 3D P2P racing-FPS game featuring AI and robust network using UDP.

## EXTRA CURRICULAR ACTIVITIES

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**Chief Editor, Board for Student Publications, IIT Delhi** (Received Best Chief Editor Award) 2015-16

**Vice Chair, ACES-ACM, Official Chapter of ACM at IIT-Delhi** 2015-16

**Debating** (National; Member of **Advisory Panel** for the Debating Society, IIT Delhi) 2013-present

- Invited adjudicator, N.V. Thadani Memorial debate. Best Adjudicator, Manzar.
- Winner, Clash of Titans debating tournament.

## TECHNICAL SKILLS

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**Languages:** Python, C/C++, MATLAB, R, Java, SML. **Libraries:** Mallet, OpenGM, Theano, CGAL, boost