

Harsh Pareek

Research Scientist at Facebook

ACADEMIC BACKGROUND:

- **University of Texas at Austin** 2011 - 2017
Computer Science PhD Program GPA: 4.0/4.0
Advisor: **Prof. Pradeep Ravikumar**, Statistical Machine Learning Group
Thesis: Listwise Frameworks for Ranking and Rank Aggregation
- **Indian Institute of Technology - Bombay (IITB), India** 2007 - 2011
B.Tech(Equivalent to BSCS) Computer Science with Honours CPI: 9.58/10
with Minor in Electrical Engineering
Relevant Coursework: Graduate-level courses on Machine Learning, Web Mining, Convex Optimization and NLP.

PUBLICATIONS

- *Distributional Rank Aggregation, and an Axiomatic Analysis* A. Prasad*, H. Pareek*, P. Ravikumar. ICML 2015
- *Tracking with ranked signals* Tianyang Li, Harsh Pareek, Pradeep Ravikumar, Dhruv Balwada, Kevin Speer. UAI 2015. (selected for plenary presentation)
- *A Representation Theory for Ranking Functions.* H. Pareek, P. Ravikumar. NIPS 2014
- *Human Boosting.* H. Pareek, P. Ravikumar. ICML 2013
– *Human Boosting* was honored as one of the “50 best ideas from UTCS”, on the 50th anniversary of the Computer Science department at UT Austin

OTHER RESEARCH AND INDUSTRY EXPERIENCE:

Clustering of user posts *September-November 2016*
Facebook, Menlo Park CA *SDE Intern, Feed Ranking Team*

- Built and deployed to production an online system to cluster incoming posts into clusters. This was continuation of work by a previous intern.

Ranking for Amazon’s mobile homepage *June-August 2016*
Amazon, Austin TX *Research Scientist Intern, Homepage Personalization Team*

- Worked across teams and created a proposal for incorporating diversity and other listwise features into the existing ranking framework for Amazon’s mobile homepage.
- Used a number of internal tools to build an end-to-end system for the above.

Time Series Analysis for eBay transaction data *Summer 2013*
eBay Research Labs *PhD Intern, Data Science Team*

- Performed time series analysis and causality analysis on eBay’s historical transaction data using Big Data technologies (Hadoop, MapReduce etc)

Transfer Learning Across Multilingual Corpora *June-July 2011*
Microsoft Research, Bangalore, India *Research Intern, Multilingual Systems Group*

- Explored transfer learning of text classifiers across languages to leverage availability of large unlabelled parallel corpora using a novel discriminative CCA technique. This allows using small amounts of labelled data in one language together with large unlabelled corpora to create and improve classifiers for other languages

Updated January 2018

Undergraduate Senior Thesis: Entity Search and Ranking *July 2010-May 2011*

Guide: Prof. Soumen Chakrabarti, IIT Bombay *Intelligent Internet Systems Group*

- Proposed RankSVM-based algorithms for ranking Wikipedia entities using bag of words and proximity based features from text and Random Walk models for entity list completion. Implemented a proof of concept system using Semantic Web technologies

Undergraduate Research Internship: Complete Functional Synthesis *May-July 2010*

Guide: Prof. V. Kuncak, EPFL, CH *Lab for Automated Reasoning and Analysis*

- Applied methods from Algebraic Geometry and Convex Analysis to design algorithms for program synthesis from specifications, in particular for programs involving linear integer and rational arithmetic formulae

HONOURS AND AWARDS:

-
- Awarded **MCD Fellowship** by the University of Texas at Austin.
 - Member of Honor Society **Phi Kappa Phi**

-
- **All India Rank 8** in IIT-JEE 2007 among over 500,000 applicants
 - **Silver** Medallist at the 38th **International Physics Olympiad 2007** in Isfahan, Iran
 - Awarded **Gold Medal** in Indian National Physics Olympiad. Indian National Chemistry Olympiad and Indian National Mathematics Olympiad (the only student (TBMK) in the history of the National Olympiad Program to be awarded all three)
 - 4th position in online contest and 7th in Onsite in **ACM ICPC Regionals 2009**
 - Ranked **2nd** in Task 2 (among undergraduates) in the **International Predictive Analytics competition** (UC San Diego Data Mining Competition 2010 sponsored by FICO)

-
- Recipient of the prestigious **Aditya Birla Group Fellowship** 2007-2011, awarded to only 10 students across all IITs
 - Awarded **NTSE Scholarship** (National Talent Search Examination) in 2005
 - Ranked 12th in the State Merit List in SSC Examination (10th Grade) 2005

SERVICE:

Reviewer for AISTats 2016

OTHER ACTIVITIES:

Participated in startup accelerator **3 Day Startup - Austin** in October 2011

Coordinating TA for CS101, IIT Bombay *July 2010 - December 2010*

One of 4 Coordinating TAs for a team of 92 TAs for 550 freshmen

Overall Coordinator for the Science Club of IIT-Bombay *July 2009 - April 2010*

Led a team of 17 students to manage 6 technical clubs

TECHNICAL SKILLS:

C/C++, MATLAB, Java, PHP, R, Python, Mechanical Turk, Hadoop, MapReduce