**Chen Dan**
PhD Student, Department of Computer Science, Carnegie Mellon University
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**Research**

My research interest is in learning theory and optimization, with a focus on:
- Nonparametric Statistics

- Unsupervised and Semi-supervised learning

- Provable guarantees for combinatorial/non-convex optimization problems

**Education**

**Carnegie Mellon University, Computer Science Department**   *Aug 2016 - Present*
*Ph.D in Computer Science*
- **Advisor:** Prof. Pradeep Ravikumar

- **Courses:** Advanced Introduction to Machine Learning; A Theorist's Toolkit; Statistical Learning Theory; Multimedia Database and Data Mining; Convex Optimization; Graduate Artificial Intelligence; Coumpter Architecture

**Toyota Technological Institute at Chicago**   *May 2018 - Aug 2018*
*Visiting Student*
- **Host:** Prof. Avrim Blum

**Peking University, School of EECS**   *Sep 2012 - July 2016*
*Bachelor of Science in Machine Intelligence*
- **Academics:** Overall GPA 3.72/4.0, Major GPA 3.75/4.0; Ranking 2/46

- **Undergraduate Thesis:**   *On Low Rank Approximation of Binary Matrices*,
  **Top-10 Undergraduate Thesis Award** in EECS, PKU
  Thesis Advisor: Prof. Liwei Wang

- **Awards:**

  - Top-10 Undergraduate Thesis Award in School of EECS, 2016
    (The only recipient in department of machine intelligence)

  - Outstanding Undergraduate Research Award - Second Prize, 2015
    (1st in department, 3rd in School of EECS);

  - Recipient of May Fourth Scholarship, 2015

  - Recipient of 8508 Alumni Scholarship, 2014

  - Recipient of Suzhou Industrial Park Scholarship, 2013

**Publications**

\* Alphabetical Order
1. **Chen Dan**, Liu Leqi, Bryon Aragam, Pradeep Ravikumar, Eric Xing,
   **The Sample Complexity of Semi-Supervised Learning with Nonparametric Mixture Models**
   *32nd Conference on Neural Information Processing Systems (NeurIPS 2018), arXiv 1809.03073*

2. Bryon Aragam, **Chen Dan**, Pradeep Ravikumar, Eric Xing,
   **Identifiability of Nonparametric Mixture Models and Bayes Optimal Clustering**,
   *Annals of Statistics 2019, arXiv 1802.04397*

3. Haris Angelidakis*, Pranjal Awasthi*, Avrim Blum*, Vaggos Chatziafratis*, **Chen Dan\***
   **Bilu-Linial Stability, Certified Algorithms and the Independent Set Problem**
   *27th Annual European Symposium on Algorithms (ESA 2019), arXiv 1810.08414*

4. **Chen Dan**, Kristoffer Arnsfelt Hansen, He Jiang, Liwei Wang and Yuchen Zhou,
   **On Low Rank Approximation of Binary Matrices**
   *43rd International Symposium on Mathematical Foundations of Computer Science (MFCS 2018), arXiv 1511.01699*

5. **Chen Dan**, Hong Wang, Hongyang Zhang, Yuchen Zhou, Pradeep Ravikumar
   **Optimal Analysis of Subset-Selection Based $L_p$ Low Rank Approximation**
   *in submission*

6. Runtian Zhai, Tianle Cai, Di He, **Chen Dan**, Kun He, John Hopcroft, Liwei Wang,
   **Adversarially Robust Generalization Just Requires More Unlabeled Data**
   *in submission, arXiv:1906.00555*

7. Xun Zheng, **Chen Dan**, Bryon Aragam, Pradeep Ravikumar, Eric Xing
   **Learning Sparse Nonparametric DAGs**
   *in submission*

**Skills**    C/C++, Matlab, Python, LaTeX