

# Varun Gangal

2nd Year PhD Student, CMU LTI

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vgtomahawk.github.io

## RESEARCH AREAS

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Natural Language Processing, Social Network Analysis

## EDUCATION

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- **PhD: Language Technologies Institute, CMU** Pittsburgh, Pennsylvania  
PhD in Language Technologies; **GPA: 4.0** Sep. 2016 – Ongoing
  - **Advisor: Eduard Hovy**
  - Key Courses: *Grammars & Lexicons, Machine Translation, Algorithms for NLP*
- **Bachelors+Masters: Indian Institute of Technology, Madras (IIT-M)** Chennai, India  
B.Tech/M.Tech. in Computer Science and Engineering; **CGPA: 9.27/10** Aug. 2011 – May. 2016
  - **Advisor: Balaraman Ravindran**
  - Key Electives: *Machine Learning, NLP, Reinforcement Learning, Memory Based Reasoning, Searching & Indexing, Knowledge Representation, Distributed Algorithms, Ontologies, Graph Theory*
  - Core Courses: *Networks, Databases, Operating Systems, Automata Theory, Compilers, Algorithms*
  - **GRE: 337/340 ( Quant: 170/170 Verbal: 167/170 Analytical Writing: 5.5/6)**
  - **TOEFL: 118/120 ( Reading: 30/30 Writing: 30/30 Listening: 30/30 Speaking: 28/30)**

## AWARDS & ACHIEVEMENTS

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- IIT JEE, 2011: All India Rank of 623 from amongst  $\cong 400000$  students
- NIPS 2015, Montreal: Funded through a Joint Science Project between IIT-M and IBM Research, India to attend the conference and present the NIPS Networks Workshop paper which I co-authored.

## PUBLICATIONS

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- “Charmanteau: Character Embedding Models For Portmanteau Creation” [[ARXIV](#)][[DEMO](#)][[CODE](#)][[DATA](#)]  
*Authors: Varun Gangal, Harsh Jhamtani, Graham Neubig, Eduard Hovy, Eric Nyberg*  
Accepted for **EMNLP 2017, Copenhagen**
- “Detecting and Explaining Causes From Text For a Time Series Event” [[ARXIV](#)]  
*Authors: Dongyeop Kang, Varun Gangal, Ang Lu, Zheng Chen, Eduard Hovy*  
Accepted for **EMNLP 2017, Copenhagen**
- “Shakespearizing Modern Language Using Copy-Enriched Sequence-to-Sequence Models” [[ARXIV](#)][[CODE](#)]  
*Authors: Varun Gangal, Harsh Jhamtani, Eduard Hovy, Eric Nyberg*  
Accepted for **EMNLP 2017 Workshop on Stylistic Variation, Copenhagen**
- “HEMI: Hyperedge Majority Influence Maximization” [[PDF](#)]  
*Authors: Varun Gangal, Balaraman Ravindran, Ramasuri Narayanam*  
Accepted for **The Second IJCAI Workshop on Social Influence Analysis (SocInf 2016), New York**
- “Trust And Distrust Across Coalitions: Shapley Value Centrality Measures For Signed Networks” [[PDF](#)]  
*Authors: Varun Gangal, Abhishek Narwekar, Balaraman Ravindran, Ramasuri Narayanam*  
Accepted for **AAAI Student Abstract 2016**
- “Trust And Distrust Across Coalitions: Shapley Value Centrality Measures For Signed Networks” [[PDF](#)]  
*Authors: Varun Gangal, Abhishek Narwekar, Balaraman Ravindran, Ramasuri Narayanam*  
Accepted for **NIPS 2015 Workshop on Networks In the Social And Information Sciences**

## PROFESSIONAL EXPERIENCE

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- **Building Ad Customer Profile Using ML (CUPRUM)** Bing Ads Team, Microsoft India  
Mentor : [Prashant Rajoria](#) May – July 2014
  - Worked on building models of various aspects of Bing advertisers such as spamminess, malware and serveability using supervised machine learning methods, based on features from their ad pages.

- **Centrality and Influence in Unconventional Social Networks**

IBM Research, India

Mentor : [Ramasuri Narayanam](#)

May – July 2015

- Worked on centrality measures for unconventional social networks such as signed networks, multiplex networks and hypergraphs

## TEACHING EXPERIENCE

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- **Teaching Assistant - Machine Learning, Fall 2015** IIT Madras
- **Teaching Assistant - Machine Learning MOOC, Spring 2016** NPTEL & IIT Madras
- **Teaching Assistant - Reinforcement Learning, Spring 2016** IIT Madras

## TECHNICAL SKILLS

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- **Programming Languages:** Java, Python, Matlab, C++, C
- **Tools & Libraries :** PyTorch, NLTK, NetworkX, Python-igraph, Scikit-Learn, Django

## CO CURRICULAR ACTIVITIES

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- **Reporting & Writing**
  - Correspondent For T5E <sup>1</sup>, 2012-2013 & 2014-2015
  - Co-Author, Immerse<sup>2</sup> 2015 - Authored an article on Evolutionary Game Theory. [[ARTICLE](#)]
- **Social Initiatives**
  - NSS <sup>3</sup> Project Representative, Wikipedia Translation to Marathi - Part of a team of 3 representatives co-guiding a team of 10 volunteers for the translation of 60 educational Wikipedia articles on science, mathematics and history from English to Marathi, my native language.

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<sup>1</sup>IIT Madras news body

<sup>2</sup>IIT-M research magazine

<sup>3</sup> National Service Scheme, IIT Madras.