

Anupam Guha

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Education

Doctor of Philosophy in Computer Science
University of Maryland, College Park, MD, USA

August 2011 to present, GPA: 4.0/4.0

Master of Science in Computer Science
Georgia Institute of Technology, Atlanta, GA, USA

August 2009 to August 2010, GPA: 4.0/4.0

Bachelor of Technology in Information Technology
Guru Gobind Singh Indraprastha University, New Delhi, India

2005–2009, CPI: 83%, First Class with Distinction

Publications in preprint

1. Mohit Iyyer, Varun Manjunatha, **Anupam Guha**, Yogarshi Vyas, Jordan Boyd-Graber, Hal Daumé III, and Larry Davis. The Amazing Mysteries of the Gutter: Drawing Inferences Between Panels in Comic Book Narratives, *arXiv*, (2016).
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Journal Publications

1. Yezhou Yang, **Anupam Guha**, Cornelia Fermüller, and Yiannis Aloimonos. A Cognitive System for Understanding Human Manipulation Actions, *Advances in Cognitive Systems*, (2014).
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Conference Publications

1. Mohit Iyyer, **Anupam Guha**, Snigdha Chaturvedi, Jordan Boyd-Graber, and Hal Daumé III. Feuding Families and Former Friends: Unsupervised Learning for Dynamic Fictional Relationships, *North American Association for Computational Linguistics (NAACL)*, (2016). **Best Paper Award**
 2. **Anupam Guha**, Mohit Iyyer, Danny Bouman, and Jordan Boyd-Graber. Removing the Training Wheels: A Coreference Dataset that Entertains Humans and Challenges Computers, *North American Association for Computational Linguistics (NAACL)*, (2015).
 3. Yezhou Yang, **Anupam Guha**, Cornelia Fermüller, and Yiannis Aloimonos. Manipulation Action Tree Bank: A Knowledge Resource for Humanoids, *IEEE/RAS International Conference on Humanoid Robots*, (2014).
 4. **Anupam Guha**, Yezhou Yang, Cornelia Fermüller, and Yiannis Aloimonos. Minimalist Plans for Interpreting Manipulation Actions, *IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS)*, (2013).
 5. Hyungsin Kim, **Anupam Guha**, Young Suk Cho, and Ellen Yi-Luen Do. Sketch-Based Screening for Cognitive Impairment Detection: A Human Centered Approach, *ACM Conference on Human Factors in Computing Systems (CHI)*, (2010).
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Workshop Publications

1. **Anupam Guha**, Mohit Iyyer, and Jordan Boyd-Graber. “A Distorted Skull Lies in the Bottom Center...” Identifying Paintings from Text Descriptions, *North American Association for Computational Linguistics (NAACL) Human-Computer QA Workshop*, (2016).
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Honours, Awards, and Activities

Best Paper Award, NAACL

June 2016

Qualcomm Innovation Fellowship, Qualcomm Award: \$100,000 (Share: \$50,000)

August 2016 - July 2017

Dean’s Fellowship, University of Maryland Award: \$5,000

August 2011 - July 2013

Founder and President of Undergraduate College Quizzing Society *Athenians*

Teaching Experience and Mentor Roles

Graduate Teaching Assistant at [Department of Computer Science](#), University of Maryland. Have led recitations in:

Java

Fall 2012

Java II

Spring 2013, Summer 2013, Summer 2014

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Fall 2011, Spring 2016

Discrete Mathematics

Spring 2012

Image Processing

Fall 2013, Fall 2014

Co-Mentor of Undergraduate Research Co-Mentored [Team Virtual](#), a team of five undergraduate students at University of Maryland, in their [Gemstone](#) Multidisciplinary Research Program, for a duration of four years.

Fellow Mentors: Dr. Yiannis Aloimonos, Gregory Kramida

Undergraduates mentored: Emily Cheung, Chris Lim, Sharise Marshall, Chris Purdy, Christina Winkler

Thesis: Adapting Behavioral Parent Training as an Interactive Computer Game

Research Experience

Graduate Research Assistant at [Computational Linguistics and Information Processing Lab](#), University of Maryland, with [Dr. Jordan Boyd-Graber](#) *June 2014–August 2014 and January 2015–May 2015*
Working on multimodal coreference resolution (primary research interest) and multimodal representations/embeddings.
Working on coreference driven factoid question answering.

Graduate Research Assistant at [Center for Automation Research](#), University of Maryland, with [Dr. Yiannis Aloimonos](#) *June 2012–August 2012, June 2016–present*
Working on manipulation action understanding with planning and linguistic information.
Working on multimodal coreference resolutions (primary research interest) among images, text and videos.
Working on semantic feedback in deep neural networks.
Working on zero shot learning using word embeddings.
Working on coreference guided word embeddings.

Graduate Research Assistant and Master's Project at [Health system's Institute](#), Georgia Institute of Technology, with [Dr. Ellen Yi-Luen Do](#) *January 2010–July 2010*
Worked on using machine learning to analyse existing psychometric data of patients suffering from mental disorders,
Worked with HCI doctoral students at GaTech and doctors at the Emory University to design new ways to collect, analyse, and predict with psychometric data

Non Academic Work Experience

Research Intern at [Comcast Labs, DC](#) supervised by Dr. Ferhan Ture *May 2016–August 2016*
Worked on extracting deep metadata (narrative structure, relationships, events, etc) from movie scripts using deep architectures (RNN, dictionary learning, deep hierarchical topic models)
Worked on unsupervised analysis of dialogue.

Research Engineer in [NSI Infinium Global Pvt. Ltd.](#), India. *September 2010–May 2011*
Responsibilities included devising AI and machine learning solutions to assist user personalization from navigation/purchase history, SEO, mining algorithms and assisting miscellaneous development projects

Service and outreach

Organiser Organised UMD-Ulster Cognitive Robotics Workshop (UUCRW), 2016 with Yezhou Yang, Cornelia Fermüller, and Yiannis Aloimonos.

Reviewer IEEE RA-L 2017, CVPR 2017

Outreach

Poster presented at DARPA Human Robot Interface Meeting in collaboration with Boston Engineering Corporation titled, Usage of Distributed Semantic Representations in Computational Linguistics and Computer Vision, *DARPA HRI*, (November 2016).

Talk on Introductory Artificial Intelligence to undergraduate students at Bharati Vidyapeeth's College of Engineering, [Guru Gobind Singh Indraprastha University](#), India, organised by ACM. *August 2014*

Skills

Languages, systems, and tools: Python (NLTK, numpy, sklearn), MATLAB, Theano, Java, L^AT_EX, HTML, MySQL, Linux
Relevant graduate courses taken in AI Planning, Machine Learning, Computational Linguistics, Computer Vision, KBAI
Exposure to OCaml, Coq Theorem Prover, LLVM compiler, Scientific Computing

Natural Languages: Native/bilingual fluency in Bangla, Hindi, and English. Beginner in French and Japanese.

References

1. Yiannis Aloimonos, yiannis@cs.umd.edu, www.cfar.umd.edu/~yiannis/, Department of Computer Science, University of Maryland, College Park, MD 20742
2. Jordan Boyd-Graber, jbg@boydgraber.org, www.cs.colorado.edu/~jbg/, Colorado Computer Science, 111B ECCS, Computer Science Engineering Center Boulder, CO 80309
3. Ferhan Ture, ferhan.ture@gmail.com, www.umiacs.umd.edu/~fture/, Comcast Labs DC, 1110 Vermont Ave NW, 6th Floor, Washington, DC 20005
4. Cornelia Fermüller fer@umiacs.umd.edu www.cfar.umd.edu/~fer/ A.V. Williams Bldg, room 4459, University of Maryland, College Park, MD 20742