# AKANKSHA ATREY
## Curriculum Vitae
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## CAREER FOCUS

I am pursuing my Ph.D. in Computer Science under Prof. David Jensen at the Knowledge Discovery Lab, UMass Amherst. My current research interests lie in building and using causal models to understand and explain deep networks.

## EDUCATION

**University of Massachusetts Amherst (CICS)** — Sep 2017 – present
*M.S./Ph.D. in Computer Science*

**University at Albany, SUNY (CEAS)** — Aug 2014 – Dec 2016
*B.Sc. Computer Science and Mathematics*
- Summa Cum Laude (**4.0 GPA**)
- Dean's List of Distinguished Students, Presidential Honor Society, Tau Sigma National Honor Society

**University of Winnipeg** — Sep 2013 – Jun 2014
*Freshmen year of B.Sc. only (3.96 GPA)*
- Dean's Honor List

**Fort Richmond Collegiate, Winnipeg, MB** — Sep 2010 – Jun 2013
*High School Diploma*
- Summa Cum Laude

## RESEARCH EXPERIENCE

**University of Massachusetts Amherst (CICS)** — Sep 2017 – present
*Research Assistant in the Knowledge Discovery Lab*
- Explainable artificial intelligence

**University at Albany, SUNY (CEAS)** — Aug 2014 – Dec 2016
*Undergraduate Research Projects*
- Twitter popularity diffusion of presidential candidates through detection of twitter bots (w/ Prof. Feng Chen)
- E-petition information diffusion in online social networks (w/ Prof. Teresa Harrison)
- Reeb graph based validation of statistical predictive models for the spread of AIDS (w/ Prof. Elizabeth Munch)

**Rutgers University, New Brunswick (SCI)** — May 2016 – Aug 2016
*Research Intern w/ Prof. Vivek Singh*
- Faces in Places: Real-time Diversity Analytics Using Social Media

## WORK EXPERIENCE

**IBM** (Poughkeepsie, NY)                                                                              Jan 2017 – Aug 2017
*Software Engineer*
- Level 2 Service for IBM z/OS mainframe
- Worked with the Supervisor and RTM components
- Languages/Tools: PLX, machine code, assembler

**University at Albany, SUNY** (Albany, NY)                                              Jan 2015 – Dec 2016
*Teaching Assistant*
- Introduction to Computer Science, Programming at the Hardware/Software Interface, Systems Programming, Automata Formal Theory

**Auto/Mate Dealership Systems** (Albany, NY)                                         Sep 2016 – Dec 2016
*Software Developer Intern*
- Worked on ReportMate on COBOL to PSQL conversions
- Languages/Tools: Java, SQL

**Commerce Hub** (Albany, NY)                                                                    Feb 2016 – May 2016
*Software Engineer Intern*
- Worked in Product Stream team, responsible for various updates, writing testing scripts, etc.
- Languages/Tools: Java, Groovy, MongoDB, Spock

**VoxVilla, LLC** (Albany, NY)                                                                       May 2015 – Aug 2015
*Web Developer Intern*
- Responsible for creating database and design of website
- Languages/Tools: Java, PHP, HTML5, SQL

## PUBLICATIONS

[1] Singh, V. K., **Atrey, A.**, & Hegde, S. (2017). Do Diverse Social Interactions Make Us Smile More Often? Studying Smiles and Diversity Via Social Media Photos. In *ACM Multimedia 2017* (pp. 1818- 1827).

[2] Harrison, T. M., Fake, T., Dumas, C., May, W., DePaula, N., **Atrey, A.**, ... & Ravi, S. S. (2017). E-Petitioning and Online Media: The Case of #BringBackOurGirls. In *ACM International Conference on Digital Government Research 2017* (pp. 11-20). **(Best Paper Award)**

[3] Singh, V. K., Hegde, S., & **Atrey, A.** (2017). Towards Measuring Fine-Grained Diversity Using Social Media Photographs. In *International AAAI Conference on Web and Social Media (ICWSM) 2017* (pp. 668- 671).

[4] Dumas, C. L., **Atrey, A.**, Lee, J., Harrison, T. M., Fake, T., Zhao, X., & Ravi, S. S. (2016). E-petition Information Diffusion in Online Social Networks. In *ACM International Conference on Digital Government Research 2016* (pp. 515-517).

## TALKS AND PRESENTATIONS

[1] *Do Diverse Social Interactions Make Us Smile More Often? Studying Smiles and Diversity Via Social Media Photos.* ACM Multimedia (ACMMM) 2017. October 2017. Paper talk & poster. *(Travel funded by ACMMM)*

[2] *Twitter Popularity Diffusion of Presidential Candidates through Detection of Twitter Bots.* MIT IEEE Undergraduate Research Conference (URTC). November 2016. Poster.

[3] *Reeb Graph Based Validation of Statistical Predictive Models for Spread of AIDS.* Grace Hopper Celebration of Women in Computing (GHC). October 2015. Poster.
[4] *Reeb Graph Based Validation of Statistical Predictive Models for Spread of AIDS.* New York Celebration of Women in Computing (NYCWIC). April 2015. Short talk.

## AWARDS AND HONORS

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|---|---|
| **Lori A. Clarke Scholarship in Computer Science** | Jun 2018 |
| **CRA-W Grad Cohort 2018 Invitation and Travel Grant** | Apr 2018 |
| **Lita and Stephen Greenwald Research Fund Award** | May 2017 |
| **ISO President's Medal for Exemplary Leadership** | Apr 2017 |
| **Spellman Top Academic Achievement Award** | Apr 2017 |
| **CRA-W Research Scholar (for Grace Hopper Celebration)** | Oct 2016 |
| **Bruce B. and Louise Steen Gravitt Scholarship** | May 2016 |
| **Spellman Top Academic Achievement Award** | Mar 2016 |
| **Tau Sigma National Honor Society Scholarship** | Jan 2016 |
| **Women and Technology Award and Scholarship** | Jun 2015 |
| **Ross A. Johnston Entrance Scholarship in Math and Statistics** | Sep 2013 |

## EXTRACURRICULAR SERVICE

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|---|---|---|
| **Indian Student Association** (UMass Amherst) | *Vice President* | Apr 2018 – present |
| **CS New Student Committee** (UMass Amherst) | *Chair* | Sep 2017 – May 2018 |
| **CS Social Committee** (UMass Amherst) | *Chair* | Sep 2017 – May 2018 |
| **Graduate Student Senate** (UMass Amherst) | *Senator* | Sep 2017 – Dec 2017 |
| **Indian Student Organization** (SUNY Albany) | *Vice President* | Jun 2016 – Dec 2016 |
| **Tau Sigma National Honor Society** (SUNY Albany) | *President* | Mar 2016 – Dec 2016 |
| **Office of Undergraduate Education** (SUNY Albany) | *Transfer Student Peer Mentor* | Sep 2015 – Dec 2016 |
| **Tau Sigma National Honor Society** (SUNY Albany) | *Secretary* | Mar 2015 – Mar 2016 |
| **Asian Pacific American Conference** (SUNY Albany) | *Logistics Chair* | Jan 2015 – Apr 2 |
| **Victoria General Hospital** (Winnipeg, MB) | *Lunch Distributer* | Aug 2012 – Jun 2014 |