# Anusri Pampari

Contact

RESEARCH INTERESTS

EDUCATION

Publications

Information

Ph.D. Student,

Stanford University

**Stanford University** 

Department of Computer Science

Ph.D., Computer Science, 2019-Ongoing

M.S., Computer Science, 2016-18

University of Illinois at Urbana-Champaign (UIUC)

Indian Institute of Technology (IIT), Bombay, India

B.Tech - M.Tech (Dual Degree), Electrical Engineering, 2011-16

EMNLP 2018: Empirical Methods in Natural Language Processing

	Authors: A. Pampari, P. Raghavan (IBM Research), J. Liang (IBM Research), J. Peng (UIUC)
	Oral paper (acceptance rate: 10%)
	Awarded the <b>Best Paper and Presentation Award</b> at the American Medical Informatics Association's (AMIA 2017) doctoral student consortium. Only masters student to be selected to present at the venue out of 6 graduate students.
	<ul> <li>Proposed a framework to generate a large-scale QA dataset consisting of questions, answers and logical forms using existing resources and minimal expert input.</li> <li>Used this framework to generate a QA dataset for Electronic Medical Records.</li> <li>Characterized the dataset and evaluated various heuristic and neural QA baselines.</li> </ul>
	SIGIR 2019: ACM's Special Interest Group on Information Retrieval "Help Me Search: Leveraging User-System Collaboration for Query Construction to Improve Accuracy for Difficult Queries" [ACM link] Authors: S. Kuzi (UIUC), A. Narwekar (UIUC), A. Pampari, C. Zhai (UIUC)
	• Implemented a novel framework where the search engine and the user work together to iteratively reformulate a input query. Method is shown to improve retrieval accuracy for difficult queries.
	Journal Submission 2020: Academic Medicine "Patient Experience Surveys Reveal Gender-Biased Descriptions of Care Providers" [under review]  *Authors: A. Pampari**, D. Haynes* (OHSU), J. Zou (Stanford), T. Greiling, (OHSU)
	• Computationally showed the gender bias in physician-patient interactions expressed through patient experience surveys
	<ul> <li>UAI 2021: Conference on Uncertainty in Artificial Intelligence</li> <li>"Unsupervised Calibration under Covariate Shift" [in preperation - Arxiv link]</li> <li>Authors: A. Pampari*, S. Ermon (Stanford)</li> </ul>
	• Introduced the problem of calibration under domain shift, and proposed an importance sampling based approach to address it.
Awards	Siebel Scholar: \$35k awarded annually for academic excellence and demonstrated leadership to over 90 top students from 16 of the worlds leading graduate schools [Press release] ['18]  Academic Awards
	<ul> <li>Academic Awards</li> <li>Awarded top reviewer (top 30%) at International Conference on Machine Learning (ICML) ['20]</li> <li>Stanford School of Engineering Fellowship for the first three quarters ['19]</li> <li>Academic Excellence Award for ranking 2nd in dept's B.Tech - M.Tech program, IIT Bombay ['16]</li> <li>Undergraduate Research Award for outstanding research contribution, IIT Bombay ['15]</li> <li>Best Research Project Award out of 112 institute wide projects, IIT Bombay ['12]</li> <li>Leadership Awards</li> <li>Organizational Excellence Award for leading the dept's mentorship body, IIT Bombay ['16]</li> </ul>
	• Organizational Excellence Award for leading the dept's mentorship body, III Bombay  • Outstanding Mentorship Honor out of 200 institute student mentors, IIT Bombay  ['15]

Regulatory Genomics, Machine Learning: Model interpretability, Model Robustness, Natural Lan-

guage Processing, Application of machine learning to health-care and biology

"emrQA: A Large Corpus for Question Answering on Electronic Medical Records"

anusri@stanford.edu

4.1/4.0

3.9/4.0

9.1/10.0

[ACL link]

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http://panushri25.github.io/

#### **Travel Awards**

- Tapia Conference Travel Grant: awarded to 3 graduate students from UIUC ['18]
- Google Conference Travel Grant: awarded to 8 students from graduate schools in USA ['18]

References

Anshul Kundaje, Assistant Professor, Stanford University — akundaje@stanford.edu/PhD adviser/ Jian Peng, Assistant Professor, UIUC — jianpeng@illinois.edu [MS adviser] James Zou, Assistant Professor, Stanford University — jamesz@stanford.edu [Research adviser] Preethi Raghavan, Research Staff Member, IBM Research — praghav@us.ibm.com [Mentor] Madhav Desai, Professor, IIT Bombay — madhav@ee.iitb.ac.in [BS adviser]

LEADERSHIP

### Head of Department Academic Mentorship Program, DAMP'15

(Aug'15 - Aug'16)

- Led a team of 20 mentors (interviewed 80 applicants) to help students facing difficulties with academic load - feedback showed 95% students showed significant grade improvements
- As a part of dept. committee, involved in restructuring undergraduate curriculum
- Enhanced faculty-student and counsellor-student interactions in the dept. by various initiatives
- Was awarded with Organizational Excellence Award by the EE department IIT Bombay

# Insitute and Department Student Mentor

(Aug'14 - Aug'16)

- Provided both personal and professional mentorship to around 15 women in engineering
- Was awarded with the Outstanding Mentorship Honor by IIT Bombay

# Technical Innovator, MIT Health Technology Camp

(Jun'15 - Jul'15)

- Worked closely with Ocularist's at L.V Prasad Eye institute
- Manufactured 'Hydro-Pro', a solution to help speedup prosthetic eye cleaning

#### **Robotics Club Coordinator**

(Aug'12 - Aug'13)

- Part of a 8 member team which led all Robotics Club activities at the university
- Organized Technical General Championships and Inter-Hostel robotic events
- Imparted technical knowledge by organizing workshops, industrial visits and guest lectures

Work Experience

# Data Shapley Optimization: Google Cloud AI, Sunnyvale, CA

(Aug'19 - Sept'19)

Guide: James Zou: Stanford, Sercan Arik: Google AI

Worked on optimizing data shapley algorithm. Showed 10x speed improvements using algorithmic approximations.

## Question-Answering: IBM Research, Cambridge, MA

(May'17 - Jul'17)

Guide: Preethi Raghavan - NLP Researcher, Jennifer Liang - Medical Researcher

Worked on question-answering and semantic parsing, extended work to a submission at EMNLP

Mobile Computing for Image Processing: Rice University, Houston, Texas (May'14 - Jul'14) Guides: Farinaz Koushanfar (ECE): UCSD, Azalia Mirhoseini: Google Brain

Explored the capability of using both mobile GPUs and CPUs (Snapdragon 800 mobile platform) to accelerate a tree matching pursuit algorithm for sparse approximation of image dictionaries.

Course Projects

- Graph Convolution Networks for Protein Interface Prediction | Bioinformatics | Prof. J. Peng
- Co-reference Resolution using RNNs | Machine Learning | Prof. D. Roth
- Triple Scoring Task, WSDM Cup | Data Mining | Prof. J. Han
- Indoor Localization using WiFi | Computer Vision | Prof. D. Hoiem
- An implementation survey on variants of RNN | Deep Learning | Prof. S. Lazebnik

Graduate Courses

Machine Learning: Machine Learning, Data Mining, Computer Vision (A+ grade), Cutting Edge Trends in Deep Learning, Bioinformatics, Advanced Information Retrieval, ML in Computational Biology (**A+ grade**)

High Performance Computing: Advanced Computing, High Performance Scientific Computing, VLSI CAD, Microprocessors, VLSI Design, Digital Systems, Systems Design, Processor Design

Teaching

- **Graduate Teaching Assistant:** 5 semesters at UIUC, 2 semesters at IIT Bombay (Aug'15 Dec'18)
  - IIT Bombay: VLSI CAD (EE677) & Digital Electronics (EE224)
  - UIUC: Bioinformatics (CS466), Intro. to Computing (CS101) & Discrete Mathematics (CS173) [UIUC list of teachers ranked excellent]

Senior Academic Mentor, Counselling Service, IIT Bombay: 4 semesters (Aug'14 - May'16)

• Conducted remedial classes for CS and EE courses for peers needing academic help

ICML 2020 reviewer, Mentor at Stanford CS undergraduate mentoring program

### Services