

Sunipa Dev

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EDUCATION AND TRAINING

- **University of California, Los Angeles** Jan 2020 – present
Computing Innovation Postdoctoral Fellow; Advisor : Kai-Wei Chang
Salt Lake City, UT
- **University of Utah** Aug 2016 – Dec 2020
PhD Computer Science; Advisor : Jeff M Phillips
Salt Lake City, UT
 - **Coursework:** Data Mining, Machine Learning, Advanced Algorithms, Data Visualization, NLP, Databases
- **Indian Institute of Science Education and Research, Kolkata** Jul 2011 – Jun 2016
Integrated Bachelors and Masters in Mathematics and Statistics
Kolkata, India
 - **Coursework:** Differential Geometry, Topology, Statistical Inference, Probability, Stochastic Processes

RESEARCH EXPERIENCE

- **University of California, Los Angeles** Jan 2021 – Present
Computing Innovation Postdoctoral Scholar; Advisor: Kai-Wei Chang
Los Angeles, CA
 - Extend NLP fundamental tasks and applications to perform well beyond just binary gender. Understand and mitigate biases therein. Develop better evaluation paradigms for models towards socially aware NLP. Extend NLP tasks meaningfully to the healthcare domain and ensure fair mental health assessments across different demographic groups.
- **University of Utah** Aug 2016 – Dec 2020
Research Assistant; Advisor: Jeff M Phillips
Salt Lake City, UT
 - Understand and enhance interpretability of high-dimensional representations. Analyze, evaluate, measure and mitigate social biases in language representations and their downstream applications in interpretable and cost-effective ways that do not break down embedding structures. Built meaningful evaluation paradigms for the same.
- **Microsoft** June 2020 – August 2020
Data Scientist Intern; Advisor: Yi Zhang
Redmond, WA
 - Built adaptive user representations which attend to a user's current needs for providing better Ad engagement.
- **Visa Research** May 2019 – Aug 2019
PhD Research Intern; Advisor: Wei Zhang
Palo Alto, CA
 - Built user and merchant representations in interpretable ways so as build better recommender systems to match users to merchants.
- **IISER Kolkata** June 2014 – June 2016
Senior Thesis Researcher; Advisor: Anirban Banerjee
Kolkata, India
- **Okinawa Institute of Science and technology** May 2015 – Aug 2015
Research Intern; Advisor: Robert Sinclair
Okinawa, Japan
- **Institute of Mathematical Sciences** May 2014 – Aug 2014
Research Assistant; Advisor: Rahul Siddhantan
Chennai, India

SELECTED PUBLICATIONS

- A. Rathore, **S. Dev**, J.M. Phillips, V. Srikumar, Y. Zheng, C. Yeh, J. Wang, W. Zhang, B. Wang; "VERB: Visualizing and Interpreting Bias Mitigation Techniques for Word Representations"; under review;
- **S. Dev**, T. Li, J.M. Phillips and V. Srikumar; "OSCAR: Orthogonal Subspace Correction and Rectification of Biases in Word Embeddings"; under review;
- **S. Dev**, T. Li, J.M. Phillips and V. Srikumar; "On Measuring and Mitigating Biased Inferences of Word Embeddings"; AAAI 2020, New York City, USA; (oral presentation)
- **S. Dev**, S. Hassan, J.M. Phillips; "Closed Form Word Embedding Alignment"; ICDM 2019, Beijing, China; (oral presentation) **In Special Issue of KAIS for Best Papers from ICDM**
- **S. Dev**, J.M. Phillips; "Attenuating Bias in Word Vectors"; AISTATS 2019, Okinawa, Japan; (oral presentation)

ACADEMIC AWARDS

- DAAD AI-net Postdoc Fellow
- **Computing Innovation Fellowship** Award Recipient 2020 (by CRA, CCC and NSF)
- Grace Hopper Scholar 2019
- INSPIRE Fellowship by DST and Govt. of India for top 1% students in Science. (2011-2016)

TEACHING

- Guest Lecture at course ‘Automatic Speech Recognition’, UCLA; Spring, 2021
- Conducted tutorial at **AAAI 2021**: A Visual Tour of Bias Mitigation Techniques in Word Embeddings.
- Teaching Mentee for Data Mining (Spring 2018, 103 students): conducted lectures, tutorials, project evaluations and office hours
- Teaching Mentee for Foundations of Data Analysis (Fall 2017, 43 students): conducted lectures, tutorials, project evaluations and office hours.
- Teaching Assistant for Mathematics II (Spring 2016, ~200 students): conducted tutorials, office hours and graded assignments and exam papers.

CONFERENCE PRESENTATIONS

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| • AAAI 2020 | Feb 2020 |
| • <i>On Measuring and Mitigating Biased Inferences of Word Embeddings (talk + poster)</i> | New York City, USA |
| • ICDM 2019 | Nov 2019 |
| • <i>Closed Form Word Embedding Alignment (talk)</i> | Beijing, China |
| • AISTats 2019 | April 2019 |
| • <i>Attenuating Biases in Word Embeddings (talk + poster)</i> | Okinawa, Japan |
| • WiML @NeurIPS 2020 | Dec 2020 |
| • <i>Extrinsic Bias Evaluations in Word Embeddings (poster)</i> | New York City, USA |

ADVISING

I am extremely fortunate to have had the opportunity to co-advise and collaborate with following students affiliated with my postdoc advisor.

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| • Masoud Monajatipor | Jan 2020 – present |
| • <i>2nd year PhD Student</i> | UCLA |
| • Anaelia Ovalle | Feb 2020 – present |
| • <i>2nd year PhD Student</i> | UCLA |
| • Arjun Subramonian | Feb 2020 – present |
| • <i>Incoming PhD Student</i> | UCLA |
| • Vijit Malik | April 2020 – present |
| • <i>4th year Undergraduate Student</i> | IIT Kanpur, India |

SERVICE

- Workflow Co-chair AAAI 2022
- Organizer of workshop at KDD 2021 on Responsible AI
- Reviewer for conferences like AAAI, EACL and ACL + workshops at ACL, ICML, EACL
- Reviewer for IEEE journals

OUTREACH

- Co-founded Women at School of Computing at University of Utah.
- Mentor at LatinX in AI
- Graduate Student Advisory Committee Member (6 students a year) from 2017-2018. Organized events for new and existing students to form sense of community, increase interactions and aid grievances or requirements among other duties. Also contributed to RPT procedures of faculty members.