

Rochester Institute of Technology

www.kaflesushant.com.np

Golisano College of Computing and Information Sciences

sushant@mail.rit.edu

1 Lomb Memorial Dr., Rochester, NY, 14623

Phone: (765) 606-6632

Research Interests: Natural Language Processing; Speech Processing; Human Computer Interaction; Accessibility;

EDUCATION

Ph.D., Golisano College of Computing and Information Sciences

2015 – Present

Rochester Institute of Technology (GPA: 3.89)

Rochester, New York

Thesis: Captioning Based on Automatic Speech Recognition Technology for Deaf and Hard of Hearing Users.

Advisor: Dr. Matt Huenerfauth

Committee: Drs. Cecilia O. Alm, Vicki Hanson, and Emily Prud'hommeaux

Bachelor of Engineering (B.E.), Computer Engineering

2014

Central Campus Pulchowk, Tribhuvan University (GPA: 4.0)

Kathmandu, Nepal

Thesis: Interest Rate Prediction of Banks – Analyzing Social-economic Trend to Predict the Interest Rate of Banks.

RESEARCH & ACADEMIC AWARDS

Best Paper Award. (2018). For “Modeling the Speech and Timing of American Sign Language to Generate Realistic Animations.” at the 20th International ACM SIGACCESS Conference on Computers and Accessibility (ASSETS'18).

2018 Language Science and Computational Linguistics Student Excellence Award. (2018). For demonstration of excellence in language science/computational linguistics. Nominations are made by the Language Science Faculty and juried by the Language Science Curriculum Committee (LCC) in Spring.

Best Paper Honorable Mention. (2018). For “Methods for Evaluation of Imperfect Captioning Tools by Deaf or Hard-of-Hearing Users at Different Reading Literacy Levels.” at the 2018 ACM Conference on Human Factors in Computing Systems (CHI'18).

Best Paper Award. (2017). For “Evaluating the Usability of Automatically Generated Captions for People who are Deaf or Hard of Hearing” at the 19th International ACM SIGACCESS Conference on Computers and Accessibility (ASSETS'17).

ACM ASSETS Doctoral Consortium. (2016). For “Effect of Speech Recognition Errors on Text Understandability for People who are Deaf or Hard of Hearing.” at the 18th International ACM SIGACCESS Conference on Computers and Accessibility (ASSETS'16).

RIT Ph.D. Merit Scholarship. (2015 – Present). Financial support for Ph.D. studies at the Rochester Institute of Technology since August 2015.

The College Fellowship. (2011 – 2015). For academic merit and performance in each semester during the undergraduate studies. Awarded by the Institute of Engineering, Central Campus Pulchowk.

Winner of Integrity Hackathon. (2013). For “FindOut”, a web application that uses interactive games to educate people about the value of integrity in work, at the Integrity Hackathon organized by Integrity Action together with Young Innovations Pvt. Ltd. Nepal.

Winner of Startup Weekend Kathmandu. (2012). For “Parikshya”, an online exam preparation portal where students take mock exams and get feedback, at the first Startup Weekend in Kathmandu.

Academic Excellence Award. (2011). For excellent academic performance in the semester exam of Bachelor’s in Engineering part of Computer Engineering. Awarded by the Free Student’s Union at the Institute of Engineering, Central Campus Pulchowk.

Academic Scholarship. (2011 – 2015). Academic scholarship to support tuitions during the undergraduate studies at the Institute of Engineering, Central Campus Pulchowk. Awarded by Tribhuwan University, selected through a nationwide competitive exam.

PUBLICATIONS

PEER-REVIEWED JOURNAL ARTICLE

- [J.1] **Sushant Kafle**, Matt Huenerfauth. 2019. “Predicting the Understandability of Imperfect English Captions for People who are Deaf or Hard of Hearing.” ACM Transactions on Accessible Computing (TACCESS’19). ACM.

PEER-REVIEWED CONFERENCE ARTICLES

- [P.8] **Sushant Kafle**, Cecilia O. Alm, Matt Huenerfauth. 2019. “Modeling Acoustic-Prosodic Cues for Word Importance Prediction in Spoken Dialogues” Proceeding of the 8th Workshop on Speech and Language Processing for Assistive Technologies. (NAACL’19).
- [P.7] Matthew Seita, Khaled Albusays, **Sushant Kafle**, Michael Stinson and Matt Huenerfauth. 2018. “Behavioral Changes in Speakers who are Automatically Captioned in Meetings with Deaf or Hard-of-Hearing Peers.” Proceedings of the 19th Annual SIGACCESS Conference on Computers and Accessibility (ASSETS’18). ACM.
- [P.6] Sedeeq Al-khazraji, Larwan Berke, **Sushant Kafle**, Peter Yeung and Matt Huenerfauth. “Modeling the Speech and Timing of American Sign Language to Generate Realistic Animations.” Proceedings of the 19th Annual SIGACCESS Conference on Computers and Accessibility (ASSETS’18). ACM. (🏆 **Best Paper Award**)
- [P.5] **Sushant Kafle**, Matt Huenerfauth. 2018. “A Corpus for Modeling Word Importance in Spoken Dialogue Transcripts.” Proceedings of the 11th International Conference on Language Resources and Evaluation (LREC’18).
- [P.4] Sedeeq Al-khazraji, **Sushant Kafle**, Matt Huenerfauth. 2018. “Modeling and Predicting the Location of Pauses for the Generation of Animations of American Sign Language.” Proceedings of the 8th Workshop on the Representation & Processing of Sign Languages: Involving the Language Community (LREC’18).
- [P.3] Larwan Berke, **Sushant Kafle**, Matt Huenerfauth. 2018. “Methods for Evaluation of Imperfect Captioning Tools by Deaf or Hard-of-Hearing Users at Different Reading Literacy Levels.” Proceedings of the 2018 ACM Conference on Human Factors in Computing Systems (CHI’18). (🏆 **Best Paper Honorable Mention**)

- [P.2] **Sushant Kafle**, Matt Huenerfauth. 2017. "Evaluating the Usability of Automatically Generated Captions for People who are Deaf or Hard of Hearing." Proceedings of the 19th Annual SIGACCESS Conference on Computers and Accessibility (ASSETS'17), Baltimore, Maryland. ACM, New York, NY, USA. (🏆 **Best Paper Award**)
- [P.1] **Sushant Kafle**, Matt Huenerfauth. 2016. "Effect of Speech Recognition Errors on Text Understandability for People who are Deaf or Hard of Hearing." Proceedings of the 7th Workshop on Speech and Language Processing for Assistive Technologies. (Interspeech'16).

DOCTORAL COLLOQUIA AND NEWSLETTERS

- [O.2] **Sushant Kafle**, Matt Huenerfauth. 2018. "Usability Evaluation of Captions for People who are Deaf or Hard of Hearing." ACM SIGACCESS Newsletter, October 2018 Issue.
- [O.1] **Sushant Kafle**. 2016. "Effect of Speech Recognition Errors on Text Understandability for People who are Deaf or Hard of Hearing." ACM SIGACCESS Conference on Computers and Accessibility (ASSETS'16).

OTHER PRESENTATIONS ([T]ALKS and [P]OSTERS)

- [T.2] **Predicting the Usability of Automatically Generated Caption for People who are Deaf or Hard of Hearing.**
- Graduate Research Showcase (RIT), 2017
- [T.1] **Modeling the Effect of Speech Recognition Errors on Text Understandability for People who are Deaf or Hard of Hearing.**
- ASSETS Doctorial Consortium, 2016
- [P.3] **Modeling Acoustic-Prosodic Cues for Word Importance Prediction in Spoken Dialogues.**
- AI@GCCIS Golisano College Research & Innovation Showcase, 2018
 - Graduate Research Showcase (RIT), 2018
- [P.2] **Word Importance Modeling to Evaluate Caption Quality for People who are Deaf or Hard of Hearing.**
- Graduate Symposium (RIT), 2016
- [P.1] **Modeling the Effect of Speech Recognition Errors on Text Understandability for People who are Deaf or Hard of Hearing.**
- Move78 Retreat (RIT), 2016
 - Effective Access Technologies Conference, 2015

PRESS AND BLOG MENTIONS

- [6] Featured in RIT University news, in a December 3, 2018 story entitled "RIT Graduate Showcase puts innovative student research on display." <http://www.rit.edu/news/story.php?id=68740>

- [5] Featured in RIT Golisano College of Computing and Information Sciences news, in a November 27, 2018 story entitled “RIT researcher awarded Best Paper for a record fourth time at premier computing accessibility conference.” <https://www.rit.edu/gccis/news/rit-researcher-awarded-best-paper-record-fourth-time-premier-computing-accessibility-conference>
- [4] Featured in RIT Reporter Magazine on October 24, 2018 in a segment entitled “RIT Mobile: Room for Improvement”, which discusses the accessibility of the RIT Mobile. <https://reporter.rit.edu/tech/rit-mobile-room-improvement>
- [3] Featured in BBC Click video on December 5, 2017, Science and Technology news, British Broadcasting Corporation, in a segment entitled “When Disability Meets Technology,” which demonstrated research on speech recognition tools for meetings for students who are Deaf or Hard of Hearing.
 - Featured in the January 5, 2018, edition of RIT in the Headlines.
 - Featured in the December 8, 2017, edition of RIT News and Events Daily.
- [2] Featured in RIT University News, in the November 28, 2017 issue, in an article entitled “RIT researchers make big splash at international computing accessibility conference.” <http://www.rit.edu/news/story.php?id=65131>
- [1] Featured in RIT Golisano College of Computing and Information Sciences news, in a November 12, 2017 story entitled “RIT researchers make prolific contributions at leading accessibility research conference.” <https://www.rit.edu/gccis/news/rit-researchers-make-prolific-contributions-leading-accessibility-conference>

WORK EXPERIENCE

Google, Research and Machine Intelligence. Software Engineering Intern (Ph.D.), Supervisor: Daniel J. Liebling	Seattle, Washington June 2018 – Sept 2018
Center for Accessibility and Inclusion Research (CAIR) Lab, RIT. Research Assistant, Supervisor: Matt Huenerfauth	Rochester, New York Aug 2015 – Present
Viveka Health LLC. Software Engineer	Kathmandu, Nepal Dec 2014 – Apr 2015
Yomari Private Limited. Research Intern	Kathmandu, Nepal Jan 2014 – July 2014
E&T Nepal Private Limited. Software Intern	Kathmandu, Nepal May 2013 – Dec 2013
Verisk Information Technology. Software Intern	Kathmandu, Nepal Sept 2013 – Nov 2013

ACADEMIC AND PROFESSIONAL SERVICE

PROFESSIONAL SERVICE

- **Reviewer.** Pattern Recognition Letters, International Association for Pattern Recognition. 2019
- **Reviewer.** 2019 Annual Conference of the North American Chapter of the Association for Computational Linguistics (NAACL) 2019
- **Information Director.** ACM Special Interest Group on Accessible Computing (SIGACCESS). 2019
- **Reviewer.** ACM Conference on Human Factors in Computing Systems (CHI). 2018
- **Program Committee.** Mid-Atlantic Student Colloquium on Speech, Language and Learning (MASC-SLL). 2018
- **Panelist.** NSF Research Experience for Undergraduates discussion at RIT. (Hosted by Dr. Cecilia O. Alm). 2017

ACADEMIC SERVICE

- **Student Ambassador.** Office of Career Services at the Rochester Institute of Technology. 2017
- **Department Student Volunteer.** Student Volunteer in the Department of Electronics and Computer Engineering at Central Campus Pulchowk. 2014

PEER MENTORING

- **Peter Yeung,** M.S. in Human Computer Interaction 2019
- **Prianti Nasir,** M.S. in Computer Science 2019
- **Abraham Glasser,** Ph.D. in Computing and Information Sciences 2019
- **Oliver Alonzo,** Ph.D. in Computing and Information Sciences 2019
- **Rahul Shah,** B.S. in Human Centered Computing 2018
- **Tomomi Takechu.** M.S. in Human Computer Interaction 2017
- **Christopher Caulfield,** B.S. in Information Technology 2017

AFFILIATIONS AND MEMBERSHIP

- Association of Computation Linguistics (ACL) 2019
- ACM Special Interest Group for Computer-Human Interaction (SIGCHI) 2017
- ACM Special Interest Group on Accessible Computing (SIGACCESS) 2017
- Special Interest Group on Speech and Language Processing for Assistive Technologies (SLPAT) 2016
- Association for Computing Machinery (ACM) 2016

