Rajesh Titung

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EDUCATION

Ph.D. in Computing and Information Sciences
2021 – Present

Rochester Institute of Technology — *Rochester, NY, USA*

- **Advisor**: Professor Cecilia O. Alm
- **Research Group**: Computational Linguistics and Speech Processing Lab
- **Select Courses:** NLP I, Statistical Machine Learning, Deep Learning, Bio-inspired Intelligent Systems, Human Factors in AI, Fundamentals of HCI
- **Advisor**: Professor Cecilia O. Alm

Bachelor in Computer Engineering
2013 – 2017

Pulchowk Campus, Institute of Engineering, Tribhuvan University — *Lalitpur, Nepal*

PROFESSIONAL EXPERIENCE

Teaching Assistant
August 2022 – December 2022

Natural Language Processing I, RIT — *Rochester, NY, US*

- Prepared a shared tasks group assignment/competition with three NLP sub-tasks and data
- Grader for technical problem sets and reading assignments (written critiques of published research papers)
- TA office hours

Graduate Research Assistant
August 2021 – Present

Computational Linguistics and Speech Processing Lab, RIT — *Rochester, NY, US*

- **Research area:** Studying benefits and trade-offs of interactive machine learning (active learning and machine teaching) for Affective Computing
- Analyzing applicability and benefits of Interactive Machine Learning (Active Learning and Machine Teaching) for Affective Computing
- Conducting an IRB-approved multimodal data collection experiment with language and dialogue using several human tasks and verifying tasks and stimuli for understudied emotions (surprisal, confusion, frustration)

Graduate Research Assistant
May – July 2022

NSF REU Site in Computational Sensing for Human-centered AI — *Rochester, NY, US*

- Co-mentored 10 undergraduate students from different universities in team-based research projects
- Held a daily technical office hour
- Organized a Mentor Café event enabling participants' near-peer interactions with PhD students
- Provided individual support to students such as academic writing in LaTeX, system setup, human subject data collection, sensor use
- Conducted sensor demo session on sensors and the iMotions software

Machine Learning Engineer
July 2018 – July 2021

Fusemachines Nepal — *Kathmandu, Nepal*

- Led a team on Zendesk-based automated reply system
- Co-led a team on an information retrieval system for a construction project leads and analytic company
- Prepared NLP, RL, and CS course materials for Fusemachines Nanodegree

PUBLICATIONS

- **Rajesh Titung** and Cecilia O. Alm. 2022. Teaching interactively to learn emotions in natural language. In Proceedings of the Second Workshop on Bridging Human–Computer Interaction and Natural Language Processing, pages 40–46, Seattle, Washington. Association for Computational Linguistics.

- **Rajesh Titung**. 2022. Interactive Machine Learning for Multimodal Affective Computing. In Proceedings of the Doctoral Consortium of 10th International Conference on Affective Computing Intelligent Interaction (ACII 2022). (Accepted and to appear).

- Cecilia O. Alm, **Rajesh Titung**, and Reynold Bailey. 2023. Pandemic impacts on assessment of undergraduate research. (poster). ACM SIGCSE Bulletin (SIGCSE 2023). (Accepted and to appear)

Extended Abstracts without Proceedings

- Cecilia O. Alm and **Rajesh Titung**. 2022. Engaging human interactions to learn emotions. EmoCHI'22.

Poster Presentation

- "Teaching Interactively to Learn Emotions in Natural Language", AI@RIT Summit. Rochester Institute of Technology, Rochester, NY, October 2022.

Recognitions/Awards

AWARE-AI NRT Traineeship program   Spring 2022 - present
- Trainee in the AWARE-AI NSF Research Traineeship (NRT) program.
- Participating in the Human sensing-AI Software Research Track.

Fusemachines AI Fellowship   2017
- Selected into a highly competitive fellowship program by Fusemachines Nepal (an AI-based company in Nepal).

Pulchowk Campus Achievements   2013–2017
- College Fellowship Scholarship in each semester and Full-fee scholarship in II/II semester
- Selected for an internship at E&T Nepal Pvt. Ltd. for a program of the company in collaboration with TU

St. Xavier's Partial Scholarship   2013
- Provided to around 18 students annually

Dhankuta District Topper   2009
- District Topper in District Level Examination

Services

- Exhibitor, Imagine RIT, Rochester Institute of Technology, USA

- Organizer at ML Workshop, IT Meet 2020, Kathmandu University, Nepal

- Organizer at Yomari Code Camp, Locus 2017, Pulchowk Campus, Nepal

Extra Activities

- Participant at Hult Prize at TU, 2016

- Android App Development Training Participant, Locus 2015

- Open Software Competition Participant, Locus 2015

- LOCUS 2014 Volunteer

- Windows 8.1 Dev Camp Participant

Technical Skills

Languages: English, Nepali, Tamang, Hindi
Programming Languages: Python, Java, C/C++, SQL (Postgres),MongoDB
Libraries: Scikit-learn, Tensorflow, Keras, Pytorch, OpenAI Gym, NLTK, spaCy, Pandas, Matplotlib, NumPy, Seaborn
Tools: Matlab, Jupyter Notebook, conda, pipenv, cookiecutter, Flask
Developer Tools: Git, Docker, Atom, AWS, Jira
Hardware/Sensory Equipmenst: Pupil Labs Pupil Core Eye tracker, SMI screen-based eye tracker, Tascam audio/speech recorders, GSR Shimmer3 wearable sensors
Other Softwares: iMotions, Praat

Additional Online Courses and Certifications

Micromasters in Artificial Intelligence   May 2019
- A four-course degree consisting of AI, ML, Robotics, and CGI.

Deep Learning Specialization   June 2019
- A five courses degree focusing on Neural network, Optimization, Management, NLP, and Computer Vision.

Intro to TensorFlow   December 2019
- Basic introduction to Tensorflow from low level to Estimator API and model scaling using Google Cloud Platform.

Reinforcement Learning Specialization   August 2020
- A four-course degree focusing on RL fundamentals, various RL algorithms, and formalizing a task as an RL problem.

Intro to Deep Learning with PyTorch   June 2020
- The course focuses on basics of Deep Learning along with GAN and using AWS services including Sagemaker, Lambda, etc to train and deploy PyTorch models

Deep Reinforcement Learning Nanodegree   July 2020
- Basics of Reinforcement along with Value-based and Policy-based methods and intro to Multi-Agent RL.