Rajesh Titung

(+1) 718-208-0664 | rt7331@rit.edu | titung-rajesh95 | titungrajesh.com.np

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, System Modeling & Optimization, Speech Processing
- **CGPA**: 3.93

Bachelor in Computer Engineering 2013 – 2017
Pulchowk Campus, Institute of Engineering, Tribhuvan University *Lalitpur, Nepal*

Professional Experience

Graduate Teaching Assistant August 2023 – Present
Foundations of Artificial Intelligence, RIT *Rochester, NY, US*

- Prepared problem sets reflecting various concepts in Artificial Intelligence
- 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 (surprise, confusion, frustration)
- Exploring federated learning and interactive machine learning for personalization in affective computing
- Providing mentorship to Masters students for their CS capstone project

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 problem sets and reading assignments
- TA office hours

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 Ph.D. 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 10^{th} International Conference on Affective Computing & Intelligent Interaction (ACII 2022).
- Cecilia O. Alm, **Rajesh Titung**, and Reynold Bailey. 2023. Pandemic Impacts on Assessment of Undergraduate Research. (poster). SIGCSE 2023: Proceedings of the 54^{th} ACM Technical Symposium on Computer Science Education.
- Isabelle Arthur, Jordan Quinn, **Rajesh Titung**, Cecilia O. Alm, and Reynold Bailey. 2023. MDE - Multimodal Data Explorer for Flexible Visualization of Multiple Data Streams. (demo). ACII 2023: 11^{th} International Conference on Affective Computing and Intelligent Interaction Workshops and Demos (ACIIW).

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 NSF Research Traineeship (NRT) 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

Service

- Serving as a Publicity Chair for HCCS Workshop at IEEE PerCom 2024
- 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 Equipments: 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.