MANOJ ACHARYA

307 Robert Quigley Dr, Scottsville,NY,14546
Email: ma7583@rit.edu
Cell: 585.364.5971
Web: www.manojacharya.com

RESEARCH INTERESTS

Machine Learning (Deep Learning), Computer Vision, Natural Language Processing (NLP), Vision and Language (Visual Question Answering (VQA), Captioning, Dialogue systems).

EDUCATION

2016 – now	Ph.D., Imaging Science Chester F. Carlson Center for Imaging Science Rochester Institute of Technology, Rochester, NY *Adviser: Christopher Kanan*
2009 – 2013	B.E, Electronics and Communication Engineering Institute of Engineering Lalitpur, Nepal **Project I:** Image Processing Based "Ball and Beam" control system **Project II:** Real Time Nepali Sign Language Recognition using Neural Network

RESEARCH PUBLICATIONS

1. Tyler L. Hayes, Kushal Kafle, Robik Shrestha, **Manoj Acharya**, Christopher Kanan. REMIND Your Neural Network to Prevent Catastrophic Forgetting (In review)
2. Aayush Chaudhary*, Rakshit Kothari*, **Manoj Acharya***, Shusil Dangi, Nitinraj Nair, Reynold Bailey, Christopher Kanan, Gabriel Diaz, Jeff B. Pelz (2019) . RITnet: Real-time Semantic Segmentation of the Eye for Gaze Tracking(ICCV) [Winning Submission]
3. **Acharya, M.**, Jariwala, K., & Kanan, C. (2019). VQD: visual query detection in natural scenes(NAACL)
4. **Acharya, M.**, Kafle, K., & Kanan, C. (2019). TallyQA: answering complex counting questions. In Association for the advancement of artificial intelligence(AAAI). [Spotlight presentation]
5. **Acharya, M.** & Pant, D. R. (2015). Computer vision based hand gesture recognition for speech disabled persons. Journal of the Institute of Engineering, 11(1), 30 - 35.

* = Equal Contribution

TALKS AND POSTERS

1. “Know *thy* Enemy: Invasive Species Detection in High Resolution Imagery”, WNYISPW 2019. (Poster)
2. On Unifying Deep Generative Models, Mathematics for Deep Learning Reading Group 2019. (Talk)
3. “TallyQA: Answering Complex Counting Questions”, Vision and Language Session (Spotlight Talk)
4. “TallyQA: Answering Complex Counting Questions”, Reasoning and Complex QA Workshop at AAAI 2019 (Poster + Talk)
5. “TallyQA: Answering Complex Counting Questions”, ViGIL workshop at NeurIPS 2018 (Poster)

RESEARCH EXPERIENCE

2013 – 2014 Researcher, PowerTech Nepal
Mentor: Surendra Mathema
Highlights: Developed inexpensive solutions to disseminate health awareness in rural hospitals. Also made embedded systems for hospitals, micro-hydro projects, disaster response units etc.

2015 – 2016 Software Developer, IT Expert
Highlights: Developed a MATLAB application to produce 3D printed artifacts with visualization tools for planning and guiding dental surgeries.

TEACHING EXPERIENCE

2018 Teaching Assistant @ Rochester Institute of Technology
Deep Learning for Computer Vision

2016 - 2017 Teaching Assistant @ Rochester Institute of Technology
Image Processing and Computer Vision I
Image Processing and Computer Vision II

Fall 2013 Lecturer @ Thapathali Engineering College
Image processing and pattern recognition

PROFESSIONAL SERVICES

Conference Reviews:

- Workshop on Shortcomings of Vision and language (SiVL) at ECCV 2018 and NAACL 2019
- EMNLP 2019
- NeurIPS 2019

- Western New York Image and Signal Processing Workshop (WNYISPW) 2019
- AAAI 2020

TECHNICAL SKILLS

Languages: English, Nepali (mother tongue), Hindi, Spanish (elementary).
Programming Languages: Python, C , C++, LATEX.
Deep/ML Toolboxes: MatConvNet, Scikit-Learn, Pytorch.
Web Development: HTML, CSS, JavaScript.

AWARDS AND ACHIEVEMENTS

- Won the Facebook OpenEds Challenge in Facebook AR/VR research workshop @ICCV 2019. (Cash prize + Travel scholarship)
- Travel grant to attend AAAI 2019, Hawaii.
- Best Student Poster Award in the annual RIT graduate showcase.
- Second position in Ethical Hacking competition organized by LOCUS 2011
- Merit Award, Four years merit based scholarship for outstanding students