

Kushal KAFLE

PERSONAL INFO

PHONE: 585-314-9196 (Cell)
EMAIL: kushalkafle@gmail.com OR kk6055@rit.edu
WEBSITE: kushalkafle.com

RESEARCH INTERESTS

Machine Learning, Deep Learning, Computer Vision, Natural Language Processing (NLP), Visual Question Answering (VQA)

EDUCATION

AUG 2014- PRESENT	Ph.D. in IMAGING SCIENCE , Chester F. Carlson Center for Imaging Science Rochester Institute of Technology, Rochester, NY Advisor: Dr. Christopher Kanan Research Group: klab Thesis Title: Towards language-grounded visual learning
OCT 2008 - DEC 2012	Bachelor's Degree in ELECTRONICS AND COMMUNICATION ENGINEERING , Institute of Engineering, Tribhuvan University, Kathmandu, Nepal Elective Specialization: Image Processing and Pattern Recognition

PUBLICATIONS

AAAI	Acharya, M., Kafle, K. , and Kanan, C. (2018). TallyQA: Answering Complex Counting Questions. <i>Association for the Advancement of Artificial Intelligence (AAAI 2018)</i> .
CVPR	Kafle, K. , Cohen, S., Price, B., and Kanan, C. (2018). DVQA: Understanding Data Visualizations via Question Answering. <i>IEEE Conference on Computer Vision and Pattern Recognition (CVPR 2018)</i> .
ICCV	Kafle, K. and Kanan, C. (2017) An analysis of visual question answering algorithms. <i>International Conference on Computer Vision ((ICCV 2017))</i> .
INLG	Kafle, K. , Yousefhussein, M., and Kanan, C.. (2017) Data augmentation for visual question answering. <i>International Natural Language Generation Conference (INLG 2017)</i> .
CVIU	Kafle, K. and Kanan, C. (2017) Visual question answering: Datasets, algorithms, and future challenges. <i>Computer Vision and Image Understanding (CVIU)</i> .
CVPR	Kafle, K. and Kanan, C. (2016) Answer-type prediction for visual question answering. <i>IEEE Conference on Computer Vision and Pattern Recognition (CVPR 2016)</i> .

RESEARCH EXPERIENCE

- MAY 2017-
MAR 2018 | **RESEARCH INTERN**
Adobe Research, San Jose, CA
Mentors: Dr. Scott Cohen and Dr. Brian Price | **Group:** [Vision Group](#)
Highlights: Developed novel data and deep learning algorithm for understanding data visualization. Published findings in CVPR 2018.
- JULY 2015-
PRESENT | **RESEARCH ASSISTANT**
Chester F. Carlson Center for Imaging Science,
Rochester Institute of Technology, Rochester, NY
Advisor: Dr. Christopher Kanan | **Group:** [klab](#)
Highlights: Research towards Ph.D dissertation on topics of language grounded visual understanding. Findings published in several high-impact conferences and journals.
- NOV 2012 -
DEC 2012 | **RESEARCH ASSISTANT**
Radio Frequency (RF) and Microwave Engineering Lab,
Tribhuvan University, Institute of Engineering, Kathmandu, Nepal
Mentor: Dr. Nanda Bikram Adhikari
Highlights: Demonstrated potential attacks and security risks on electronic voting system based on ISO/IEC14443 HF-RFID tags

TEACHING EXPERIENCE

- AUG 2014 -
MAY 2015 | **TEACHING ASSISTANT**
Chester F. Carlson Center for Imaging Science,
Rochester Institute of Technology, Rochester, NY
Highlights: Teaching Assistant for courses *Radiometry* and *Fundamentals of Imaging Science*
- MAY 2013 -
OCT 2013 | **LECTURER**
College of Information Technology and Engineering,
Purbanchal University, Kathmandu, Nepal
Highlights: Taught an undergraduate semester course on *Image Processing and Pattern Recognition*

HONORS , AWARDS AND GRANTS

- **Outstanding Reviewer Computer Vision and Pattern Recognition (CVPR 2018)**
Awarded to about 6.9% of all reviewers.
- **Travel Award - 2016 Deep Learning Summer School**
Registration fee waiver granted to attend deep learning summer school, 2016
- **Amazon AWS Research Grant**
Co-applied with Dr. Christopher Kanan. Worth \$15,000 in AWS credits.
- **R&D Grant from Alternative Energy Promotion Center**
Team Lead for grant awarded for developing prototype remote monitoring system.
- **Winner of National Design Competition**
Team lead for the winning design for the nationwide system design competition "*Electronically Operated Innovative Monitoring System for Solar Home Systems installed in Rural Areas of*

Nepal” organized by Alternative Energy Promotion Center, Under ministry of Environment and Population, Nepal Government.

- **Scholarship from Ministry of General Administration, Nepal Government**
Awarded only to 200 Engineering, Science, and Medicine students across the country.

SKILLS

Deep Learning Packages		Tensorflow, PyTorch, Keras
Proficient in Programming		Python, MATLAB
Other Skills		Git, \LaTeX , Crowd-sourcing using Amazon Mechanical Turk (AMT)

PROFESSIONAL SERVICES

- **Workshop Organization:**
 - Workshop on shortcomings of vision and language (SiVL) at ECCV, 2018
 - Workshop on shortcomings of vision and language (SiVL) at NAACL, 2019
- **Conference Reviewing:**
 - Neural Information Processing System (NIPS) - 2016
 - International Conference on Image Processing (ICIP) - 2017
 - Computer Vision and Pattern Recognition (CVPR) - 2017, 2018, 2019
 - Association for the Advancement of Artificial Intelligence (AAAI) - 2017
- **Journal Reviewing:**
 - Computer Vision and Image Understanding (CVIU) - 2017
 - ACM Transactions on Multimedia Computing Communications and Applications (TOMM) - 2018

LANGUAGES

NEPALI:	Native proficiency
ENGLISH:	Full professional proficiency (TOEFL score: 118/120)
HINDI:	Limited working proficiency