Kushal Kafle

PERSONAL DATA

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RESEARCH INTERSTS

Machine Learning, Computer Vision, Deep Learning, Image and Natural Language Understanding

EDUCATION

Aug 2014 - Pd.D. in Imaging Science, Current Chester F. Carlson Center

Chester F. Carlson Center for Imaging Science Rochester Institute of Technology, Rochester, NY

Advisor: Dr. Christopher Kanan | Research Group: klab

OCT 2008 - Bachelor's Degree in Electronics and Communication Engineering, Dec 2012 Tribhuvan University, Institute of Engineering, Kathmandu, Nepal

Elective Specilization: Image Processing and Pattern Recognition

PUBLICATIONS

 Answer-Type Prediction for Visual Question Answering, Kafle, K. and *Kanan, C. In: Proceedings of IEEE Conference on Computer Vision and Pattern Recognition (CVPR-2016)

RESEARCH EXPERIENCES

IULY 2015 RESEARCH ASSISTANT

- Current | Chester F. Carlson Center for Imaging Science,

Rochester Institute of Technology, Rochester, NY Advisor: Dr. Christopher Kanan | Research Group: klab

Topics : Computer Vision, Deep Learning, Visual Question Answering, Natural

Language Processing

APR 2013 - | R&D CONSULTANT

JULY 2013 Alternative Energy Promotion Center, Lalitpur, Nepal

Ministry of Environment and Population, Nepal Government

Tasks: Feasibility study of remote monitoring scheme for Solar Home Systems in rural areas. Development of Prototype remote monitoring system.

Nov 2012 - RESEARCH ASSISTANT

DEC 2012 RF and Microwave Engineering Lab,

Tribhuvan University, Institute of Engineering, Kathmandu, Nepal

 ${\bf Tasks}: \ {\bf Demonstrated} \ the \ vulnerability \ of \ ISO/IEC14443 \ HF-RFID \ tags \ with regards to its use in e-Voting system. \ {\bf Designed} \ and \ reproduced \ security \ risks$

and potential attacks in laboratory.

TEACHING EXPERIENCES

JAN 2015 - TEACHING ASSISTANT

MAY 2014 | Chester F. Carlson Center for Imaging Science,

Rochester Institute of Technology, Rochester, NY **Under**: Dr. Emmett Ientilucci | **Class**: Radiometry

Tasks: Designed, conducted and graded laboratory exercises and homework

assignments

AUG 2014 - TEACHING ASSISTANT

DEC 2014 Chester F. Carlson Center for Imaging Science,

Rochester Institute of Technology, Rochester, NY

Under: Dr. Anthony Vodacek | Class: Fundamentals of Imaging Science

Tasks: Conducted and graded laboratory exercises

MAY 2013 - LECTURER

OCT 2013 | College of Information Technology and Engineering,

Purbanchal University, Kathmandu, Nepal

Subject: Image Processing and Pattern Recognition

Tasks: Taught lecture and tutorial module as per existing syllabus. Designed, conducted and graded laboratory exercises and homework assignments.

WORK EXPERIENCES

JUNE 2013- | SOFTWARE DEVELOPER

SEPT 2013 Technology Sales Pct. Ltd. Kathmandu, Nepal

Responsibilities: Developed an user-friendly interface in Visual C# for smartcard based vehicle checkpoint entry system installed nationwide. Functions included tracking and logging trips in central database, issuing, verifying and renewing permit imprinted in smart card etc

SCHOLARSHIPS, AWARDS AND GRANTS

MAR 2016 | AWS Research Grant

Co-PI with Dr. Christopher Kanan. Granted \$15000 AWS credit.

APR 2013 | Grant from Alternative Energy Promotion Center (Contract number: 245160)

Team Lead on Grant of NRs. 67900, awarded for development of prototype

remote monitoring system.

DEC 2012 | Winner of Nationwide Design Competition

Team lead of winning design of open design competition entitled "Electronically Operated Innovative Monitoring System for Solar Home Systems installed in Rural Areas of Nepal" organised by Alternative Energy Promotion Ceneter, Under ministry of Environment and Population, Nepal Government.

2009-2012 | Scholarship from Nepal Government

Scholarship from Ministry of General Administration, Scholarship Division Committee. Granted only to 200 Engineering, Science and Medicine students each year across the country.

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2008-2012 College Fellowship Scholarship
Granted by Tribhuvan University based on Merit per semester. Fellowship

granted on six out of eight semesters.

SKILLS

Deep Learning Packages | Caffe, Matconvnet, Theano (Basic)

Competent in Programming | C, C++, MATLAB, PYTHON,

Also Familiar With JAVA, C#, IDL, PIC Micro-controller Programming,

Assembly (8085, 8086)

Web Programming Stack | HTML, CSS, JavaScript, JQuery, CherryPy, PHP Ba-

sic Server Configuration in Nginx and Apache,

Databases SQLite and MySQL

Operating Systems Linux (Ubuntu), Microsoft Windows (XP and above),

Mac OS-X (Basic)

TypeSetting & Spreadsheet: Open Office, Excel, Word, PowerPoint, LATEX

LANGUAGES

NEPALI: Mothertongue

ENGLISH: Fluent | TOEFL score of 118/120 | Equivalent IELTS score of band 9.0/9.0

HINDI: Basic Reading and Conversation Skills

MEMBERSHIPS

• IEEE Student Member

OTHER INTERESTS AND ACTIVITIES

PHOTOGRAPHY

I enjoy taking pictures and learning new techniques. But I am not as serious as I used to be in the past $\,$

- Top-25 in "Hamro Nepal" (Translated "Our Nepal") Competition/Exhibition by ARTUDIO, 2012
- Finalist in "The Best of Nepal" photo Exhibition by ROTASIA-2012

IN SPARE TIME

Reading (Fiction and non-Fiction), Hiking, Board Games, Keeping up with Current Affairs and Tech Advancements