

Rudra Poudel

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Personal Profile

Experienced artificial intelligence, machine learning and computer vision researcher. Current research interests include efficient (less supervision + computation + data) learning in deep neural networks and reinforcement learning.

Education

2010-2014 PhD in Computer Science, Bournemouth University, UK

Subjects: machine learning, computer vision
Thesis: 3D Hand Tracking

2008-2009 MSc in Evolutionary and Adaptive Systems, University of Sussex, UK

Subjects: computational neuroscience, neural networks, machine learning, computer vision

2001-2003 Masters in Business Studies, Tribhuvan University, Nepal

Subjects: management information systems, decision support systems

1997-2000 BSc in Computer Science, Tribhuvan University, Nepal

Subjects: computer science, maths, statistics

Employment History

Sep 2016 - Present Toshiba Research Europe, Cambridge, UK

Researcher

- Research in machine learning, deep learning and reinforcement learning.
- PhD students supervision in Oxford and Cambridge universities.

Sep 2014 - Aug 2016 King's College London, UK

Research Associate

- Research in machine learning and deep learning for medical image analysis.
- Supervision and examination of PhD and MSc thesis.

Sep 2013 - Jan 2014 Microsoft Research, Cambridge, UK

Research Intern

- Research in deep learning for hand pose estimation.

Apr 2010 - Oct 2010 Siemens Corporate Research, NJ, USA

Research Intern

- Worked in computer vision and medical image analysis.

Jul 2007 - Elvsys, Kathmandu, Nepal
Aug 2008 *Chief Architect- R&D, Co-Founder*

- R&D in big data analysis and data migration.
- Coordinated with international clients.

May 2000 - Kathmandu, Nepal
Jun 2007 *Software Engineer, Project Manager*

- Major responsibilities included system analysis and software development.
- Design and developed distributed poker game engine, ads analytics and more.

Teaching Experience

2003-2008 NCCS, Tribhuvan University, Nepal
Lecturer, Object Oriented Programming with C++

2006-2007 Sanker Dev Campus, Tribhuvan University, Nepal
Lecturer, Management Information System
Lecturer, Operations Management

2006-2007 Ace Institute of Management, Pokhara University, Nepal
Lecturer, Management Information System

Students

- Alasdair Paren, PhD in Oxford University, jointly supervised with Pawan Kumar.
- Anthony Hu, PhD in Cambridge University, jointly supervised with Roberto Cipolla.

Technical Skills

- **Programming Languages**
C++, Python, Matlab, C#, ASPnet, Java; SQL
- **Libraries / Tools**
TensorFlow, OpenCV, Torch ML, PCL

Entrepreneurship

- Jun 2007 - Nov 2011, Co-founder of Elvsys, Nepal, scaled it from 3 to 30 people company.

Funding/Awards

- Oct 2009 - Mar 2013, Bournemouth studentship for PhD, Bournemouth University, UK.
- Oct 2008 - Aug 2009, Chancellor's international scholarship for MSc, University of Sussex, UK.
- Jan 2002 - Jun 2002, Microhard scholarship for diploma in computer application, India.

Publications

1. Rudra PK Poudel, Stephan Liwicki, Roberto Cipolla. *Fast-SCNN: Fast Semantic Segmentation Network*. In arXiv:1902.04502, 2019.
2. Rudra PK Poudel, Ujwal Bonde, Stephan Liwicki, Christopher Zach. *ContextNet: Exploring Context and Detail for Semantic Segmentation in Real-time*. In British Machine Vision Conference (BMVC), 2018. [Oral]
3. James H Cole, Rudra PK Poudel, Dimosthenis Tsagkrasoulis, Matthan WA Caan, Claire Steves, Tim D Spector, Giovanni Montana. *Predicting Brain Age with Deep Learning from Raw Imaging Data Results in a Reliable and Heritable Biomarker*. In NeuroImage, 2017.
4. Rudra PK Poudel, Pablo Lamata, Giovanni Montana. *Recurrent Fully Convolutional Neural Networks for Multi-slice MRI Cardiac Segmentation*. In Medical Image Computing and Computer Assisted Interventions Conference (MICCAI) Workshop, 2016.
5. Rudra PK Poudel. *3D Hand Tracking*. PhD Thesis, Bournemouth University, UK, 2014.
6. Rudra PK Poudel, Hammadi Nait-Charif, Jian J Zhang, and David Liu. *Skin Color Detection Using Region-Based Approach*. In International Journal of Image Processing (IJIP), 2013.
7. Rudra PK Poudel, Jose A Fonseca, Jian J Zhang, and Hammaid Nait-Charif. *A Unified Framework for 3D Hand Tracking*. In International Symposium on Visual Computing (ISVC), 2013. [Oral]
8. Rudra PK Poudel, Hammadi Nait-Charif, Jian J Zhang, and David Liu. *Region-Based Skin Color Detection*. In Proceedings of the International Conference on Computer Vision Theory and Applications (VISAPP), 2012. [Oral]
9. Rudra PK Poudel. *Real-Time Hand Gesture Recognition for Low Resource Devices*. MSc Thesis, University of Sussex, UK, 2009.