DEBANGA RAJ NEOG

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1. EMPLOYMENT

RESEARCH ASSISTANT, 2011-Present
UNIVERSITY OF BRITISH COLUMBIA
Developing the first efficient and robust real-time animation system for soft tissue movement around the eyes based on gaze input.

CO-FOUNDER, WEGO RIDESHARING, 2016-Present
Connect like minded people to share rides to events. Using machine learning algorithms we optimize cost to find the best routes to share.

RESEARCH INTERNSHIP, 2010
HANYANG UNIVERSITY, SOUTH KOREA
Proposed an image segmentation technique based on IT2 Fuzzy logic that produced multilevel segmentation results better than the state-of-the-art.

RESEARCH INTERNSHIP, 2010
CHUBU UNIVERSITY, JAPAN
Proposed a technique to remove specularity from Endoscope images and improved 3D reconstruction using only single camera view.

2. TECHNICAL SKILLS

LANGUAGES
C++, Python, MATLAB, HTML/CSS, Javascript
HARDWARE
Motion capture (VICON), Eye tracking
SPECIALIZATIONS
Object tracking, Face and eye tracking, Facial animation, Machine learning, Image Processing

3. EDUCATION

PHD CANDIDATE, COMPUTER SCIENCE
University of British Columbia, (Major: A+)
2011-Present

BACHELOR OF TECHNOLOGY, ELECTORNICS AND COMMUNICATION
Indian Institute of Technology Guwahati
(CPI 9.1 / 10)
2007 - 2011

4. AWARDS

FOUR YEAR DOCTORAL FELLOWSHIP
UNIVERSITY OF BRITISH COLUMBIA
2012-2016
GLOBALINK RESEARCH AWARD
MITACS AND INRIA
2016
JAPANESE RESEARCH MERIT AWARD
INSPEC INC. JAPAN
2011-2012

5. PROJECT EXPERIENCE

LEAD RESEARCHER
INTERACTIVE GAZE DRIVEN ANIMATION OF EYE
2015-PRESENT
Developing a data driven model of eye movement, that includes movement of the globes, the periorbital soft tissues and eyelids, and formation of wrinkles.

EYEGAZE: ROBUST 3D GAZE ESTIMATION
2013-2014
Developed a gaze estimation technique that uses binocular information to obtain the highest precision in the gaze point estimation.

HAND GESTURE RECOGNITION SYSTEM USING HMM
2010-2011
Proposed a real-time hand gesture recognition system to recognize global hand motions using Hidden Markov Model (HMM).

6. RELEVANT COURSES

Graduate Coursework
Algorithm Design; Operating Systems; Artificial Intelligence; Machine Learning; Computer Vision, Numerical Methods
Undergraduate Coursework
Probability and Random Processes; Data Structures; Embedded Architecture; Computer Vision; Signals and Systems; Network Systems; Image Processing

7. SELECTED PUBLICATIONS

PATENT
Methods and Systems for Computer-based Skin Animation
Dinesh K. Pai, Duo Li, Shinjiro Sueda, D R Neog, WIPO patent publication number WO2014205584

JOURNALS/CONFERENCES/POSTERS
Interactive Gaze Driven Animation of the Eye Region
D.R. Neog, J. L. Cardoso, A. Ranjan, D. K. Pai, Proceedings of the 21st International Conference on 3D Web Technology (Web3D '16), 2016, (BEST PAPER AWARD)

Shape from an Endoscope Image Using Extended Fast Marching Method
D. R. Neog, Y. Iwahori, M. K. Bhuyan, R. J. Woodham, and K. Kasugai, 5th Indian International Conference on Artificial Intelligence (IICAI-11), Tumkur, India, 2011

An Interval Type 2 Fuzzy Approach to Multilevel Image Segmentation
D. R. Neog, M. A. Raza, F. -C. -H. Rhee, IEEE International Conference on Fuzzy Systems, Taipei, Taiwan, 2011
Please visit http://www.cs.ubc.ca/~debanga/publication.html

8. REFERENCES

DINESH K. PAI
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