Jong-Chyi Su

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Research Interests

Computer Vision, Image Recognition, Machine Learning, Domain Adaptation

Education

Ph.D. Student, Computer Science, University of Massachusetts, Amherst — Sep. 2015 - Present
M.S., Computer Science, University of California, San Diego — Sep. 2013 - Jun. 2015
B.S., Electrical Engineering, National Taiwan University — Sep. 2008 - Jun. 2012

Publications

[1] **Cross Quality Distillation for Adapting Models to Signal Degradation**
Jong-Chyi Su, Subhransu Maji
arXiv preprint:1604.00433

[2] **Depth Estimation and Specular Removal for Glossy Surfaces Using Point and Line Consistency with Light-Field Cameras**
Michael Tao, Jong-Chyi Su, Ting-Chun Wang, Jitendra Malik, and Ravi Ramamoorthi
IEEE Transactions on Pattern Analysis and Machine Intelligence (PAMI), Volume 38 Issue 6, June 2016.

[3] **Configurable Pixel Shader Workload Reduction Technique for Mobile GPUs**
Yu-Jung Chen, Jong-Chyi Su, Chia-Ming Chang, Yen-Chang Lu, and Shao-Yi Chien
IEEE Global Conference on Consumer Electronics, 2012. Best Student Paper Award.

Research Experience

Domain Adaptation through Distillation — Sep. 2015 - Present
Dr. Subhransu Maji, University of Massachusetts, Amherst
- Proposed a technique for training CNNs to enhance recognition accuracy on low-quality data through distillation.
- Our result outperformed other domain adaptation methods on various fine-grained recognition datasets.

Depth Estimation for Glossy Surfaces with Light-Field Cameras — Jul. 2014 - Apr. 2015
Dr. Ravi Ramamoorthi, University of California, San Diego
- Designed a novel algorithm to separate specular and diffuse regions, and estimate the light source color for light-field images gathering from Lytro camera.
- Developed a program that removes specular component for glossy surfaces, and improves the result of depth estimation by feeding diffuse-only images into a depth estimation algorithm.

Work Experience

Research Assistant, UMass-Amherst — Sep. 2015 - Present
- Worked with Dr. Subhransu Maji on fine-grained recognition, segmentation, and domain adaptation problems using deep learning.

Research Assistant, UCSD — Jul. 2014 - Dec. 2014
- Worked with Dr. Ravi Ramamoorthi on depth estimation for glossy surfaces with light-field cameras.

Research Assistant, Rady School of Management, UCSD Mar. 2014 - Apr. 2014
- Worked with Dr. Hyoduk Shin to help solve an optimization problem about the pricing strategy for supply chain.

System Engineer Intern, Synaptics, Inc., Taipei Jul. 2011 - Aug. 2011
- Designed algorithms to improve the performance of touch panel on mobile phones in noisy environment.

Teaching Experience

Teaching Assistant, UCSD
- CSE 140, Components and Design Techniques for Digital Systems Spring 2015
- CSE 250B, Machine Learning Winter 2015
- CSE 150, Introduction to Artificial Intelligence Summer 2014
- CSE 140, Components and Design Techniques for Digital Systems Spring 2014

Awards

- MS Research Initiation Awards, CSE Department, UCSD Jul. 2014 - Sep. 2014
- Best Student Paper Award, *IEEE Global Conference on Consumer Electronics* Oct. 2012

Technical Skills

Programming Languages: MATLAB, C/C++, python.