# Li, Ang

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## Education

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| Ph.D. Computer Science, University of Maryland | August 2017 |
| M.S. Computer Science, University of Maryland | May 2016 |
| B.S. Computer Science, Nanjing University | July 2011 |

## Employment

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|---|---|
| DeepMind, Mountain View CA, Senior Research Scientist | 2019–present |
| Google Launchpad Accelerator, San Francisco CA, AI Coach | 2019–present |
| DeepMind, Mountain View CA, Research Scientist | 2017–2019 |
| Facebook AI Research, New York NY, Research Intern | Summer, Fall 2016 |
| Comcast Labs, Washington DC, Research Intern | Spring 2016 |
| Google, Mountain View CA, Software Engineering Intern | Summer 2015 |
| Apple, Cupertino CA, Engineering Intern | Winter, Summer 2014 |
| Apple, Cupertino CA, Engineering Intern | Summer 2013 |
| University of Maryland, College Park, Research Assistant | 2013–2017 |
| University of Maryland, College Park, Teaching Assistant | Fall 2012 |
| Carnegie Mellon University, Robotics Institute, Pittsburgh, Research Associate | 2011-2012 |
| National Key Lab for Novel Software Technology, Nanjing, Research Assistant | 2009-2011 |

## Honors & Scholarships

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|---|---|
| CVPR 2017 Doctoral Consortium Travel Award | 2017 |
| ICDE 2017 NSF Student Travel Grant | 2017 |
| Graduate Research Appreciation Award, University of Maryland | 2017 |
| Dean's Fellowship, University of Maryland | 2012–2014 |
| First Prize Collegiate Graduation Thesis in Jiangsu Province, China. | 2011 |
| Outstanding Undergraduate Thesis Award, Nanjing University | 2011 |

Computer World Scholarship 2011

IBM Chinese Excellent Student Scholarship 2010

ECCV 2010 Student Travel Grant 2010

Provincial-Level Outstanding Collegiate Student in Jiangsu, China 2009

Pacemaker to Outstanding Student at Nanjing University 2009

Pan Xueping's Scholarship 2009

National Scholarship 2008

## Awards

*27th Place*, World Finals of ACM Int'l Collegiate Programming Contest, St. Petersburg, Russia 2013

*UPE First to Solve Problem J Award*, ACM/ICPC World Finals, St. Petersburg, Russia 2013

*Champion*, ACM Int'l Collegiate Programming Contest Regional Mid-Atlantic, United States 2012

*Meritorious Winner*, Mathematical Contest in Modeling, United States 2010

*49th Place*, World Finals of ACM Int'l Collegiate Programming Contest, Stockholm, Sweden 2009

*First Prize Nationwide*, Contemporary Undergraduate Mathematical Contest in Modeling, China 2008

## Activities

*Coach* for University of Maryland ACM/ICPC team 2014

*Problem Developer* for 23rd Maryland Annual High School Programming Contest 2013

*Director* at the 7th Nanjing Univeristy Local Programming Contest, Nanjing 2009

## Academic Services

Journal Reviewer, IEEE Transaction on Neural Network and Learning Systems 2019

Journal Reviewer, Robotics and Autonomous Systems 2018

Journal Reviewer, SPIE Journal of Electornic Imaging 2014, 2016, 2018

Journal Reviewer, IEEE Transaction on Image Processing 2017

Journal Reviewer, IEEE Transaction on Cybernetics 2014

Journal Reviewer, The Visual Computer Journal 2016

Journal Reviewer, Machine Learning 2019

Program Committee Member, IEEE Conf. on Computer Vision and Pattern Recognition 2017, 2018, 2019

Program Committee Member, International Conference on Machine Learning 2017, 2018, 2019

Program Committee Member, European Conference on Computer Vision 2018

Reviewer, IEEE International Conference on Computer Vision 2017, 2019

Reviewer, International Conference on Learning Representations 2018, 2019, 2020

Reviewer, Annual Conference on Neural Information Processing Systems 2017, 2018, 2019

Reviewer, Asian Conference on Computer Vision 2018

Asian Conference on Machine Learning (ACML) 2019

Winter Conference on Computer Vision (WACV) 2020

# Publications

## *Theses*

Ph.D. Thesis. Towards Robust, Interpretable and Scalable Visual Representations. University of Maryland, College Park, Maryland, United States. August 2017. Thesis Committee: Larry S. Davis, Rama Chellappa, Hal Daumé III, Ramani Duraiswami, Tom Goldstein.

B.S. Thesis. Robust Image Representation and Visual Tracking based on Binary Features. Nanjing University. Nanjing, Jiangsu, China. June 2011. *Awards: Outstanding Undergraduate Thesis Award in Nanjing University (The Only in Computer Science); First Prize Collegiate Graduation Thesis in Jiangsu Province.*

## *Journal Articles*

Y. Guo, Y. Chen, F. Tang, **A. Li**, W. Luo, M. Liu. Object Tracking Using Learned Feature Manifolds. *Computer Vision and Image Understanding (CVIU)*. 2013.

## *Proceedings*

**A. Li***, H. Hu*, P. Mirowski, M. Farajtabar. Cross-View Policy Learning for Street Navigation. ICCV 2019.

R. Yu, H. Wang, **A. Li**, J. Zheng, V. I. Morariu, L. S. Davis. Layout-induced Video Representation for Recognizing Agent-in-Place Actions. ICCV 2019.

**Ang Li**, Ola Spyra, Sagi Perel, Valentin Dalibard, Max Jaderberg, Chenjie Gu, David Budden, Tim Harley, Pramod Gupta. A Generalized Framework for Population Based Training. KDD 2019.

Hongjie Zhang, **Ang Li**, Xu Han, Zhaoming Chen, Yang Zhang, Yanwen Guo. Improving Open Set Domain Adaptation Using Image-to-Image Translation. ICME 2019.

Jiaqi Ma, Zhe Zhao, Jilin Chen, **Ang Li**, Lichan Hong, Ed H. Chi. SNR: Sub-Network Routing for Flexible Parameter Sharing in Multi-task Learning. AAAI Conference on Artificial Intelligence (AAAI), Honolulu, Hawaii, 2019.

M. Gao, **A. Li**, R. Yu, V. I. Morariu and L. S. Davis. C-WSL: Count-guided Weakly Supervised Localization. *European Conference on Computer Vision (ECCV)*. Munich, Germany, 2018.

R. Yu, **A. Li**, C.-F. Chen, J.-H. Lai, V. I. Morariu, L. S. Davis and C.-Y. Lin. Pruning Networks Using Neuron Importance Score Propagation. *IEEE Conference on Computer Vision and Pattern Recognition (CVPR)*. Salt Lake City, UT, 2018.

M. Gao, R. Yu, **A. Li**, V. I. Morariu and L. S. Davis. Dynamic Zoom-in Network for Fast Object Detection in Large Images. *IEEE Conference on Computer Vision and Pattern Recognition (CVPR)*. Salt Lake City, UT, 2018.

R. Yu, **A. Li**, V. I. Morariu and L. S. Davis. Visual Relationship Detection with Internal and External Linguistic Knowledge Distillation. *IEEE International Conference on Computer Vision (ICCV)*. Venice, Italy, 2017.

**A. Li**, A. Jabri, A. Joulin and L.J.P. van der Maaten. Learning Visual N-Grams from Web Data. *IEEE International Conference on Computer Vision (ICCV)*. Venice, Italy, 2017.

**A. Li**, J. Sun, J. Y.-H. Ng, R. Yu, V. I. Morariu and L. S. Davis. Generating Holistic 3D Scene Abstractions for Text-based Image Retrieval. *IEEE Conference on Computer Vision and Pattern Recognition (CVPR)*. Honululu, Hawaii, 2017.

H. Miao, **A. Li**, L. S. Davis and A. Deshpande. Towards Unified Data and Lifecycle Management for Deep Learning. *IEEE International Conference on Data Engineering (ICDE)*. San Diego, California, 2017.

H. Miao, **A. Li**, L. S. Davis and A. Deshpande. On Model Discovery For Hosted Data Science Projects. *ACM SIGMOD 1st Workshop on Data Management for End-to-End Machine Learning (DEEM)*. Chicago, Illinois, 2017.

H. Miao, **A. Li**, L. S. Davis and A. Deshpande. ModelHub: Deep Learning Lifecycle Management. *IEEE International Conference on Data Engineering (ICDE)*. San Diego, California, 2017. Demonstration track.

**A. Li**, V. I. Morariu and L. S. Davis. Selective Encoding for Recognizing Unreliably Localized Faces. *IEEE International Conference on Computer Vision (ICCV)*. Santiago, Chile, 2015.

**A. Li**, V. I. Morariu and L. S. Davis. Planar Structure Matching Under Projective Uncertainty for Geolocation. *European Conference on Computer Vision (ECCV)*. Zurich, Switzerland, 2014.

Z. Yu, **A. Li**, O. C. Au and C. Xu. Bag of Textons for Image Segmentation via Soft Clustering and Convex Shift. *IEEE Conference on Computer Vision and Pattern Recognition (CVPR)*. Providence, Rhode Island, 2012.

**A. Li**, F. Tang, Y. Guo and H. Tao. Discriminative Nonorthogonal Binary Subspace Tracking. In *European Conference on Computer Vision (ECCV)*. Hersonissos, Greece, 2010.

## *Preprints*

Nir Levine*, Yinlam Chow*, Rui Shu, **Ang Li**, Mohammad Ghavamzadeh, Hung Bui. Prediction, Consistency, Curvature: Representation Learning for Locally-Linear Control. ArXiv 2019.

Seyed-Iman Mirzadeh, Mehrdad Farajtabar, **Ang Li**, Hassan Ghasemzadeh. Improved Knowledge Distillation via Teacher Assistant: Bridging the Gap Between Student and Teacher. ArXiv 2019.

## *Technical reports*

**A. Li**, F. Tang, Y. Guo and H. Tao. Efficient Discriminative Nonorthogonal Binary Subspace with its Application to Visual Tracking. Tech report.

Z. Yao, **A. Li**, S. Mann. Analysis of the Weight Function for Implicit Moving Least Squares Techniques. Tech report.

## Patents

F. Tang, **A. Li** and X. Shi. Three-Dimensional Hand Tracking Using Depth Sequences. US Patent 9,811,721

## Talks

Invited talk at Google Research, Cross-view policy learning for street navigation 2019

Invited talk at X Coloquium, Cross-view policy learning for street navigation 2019

Invited talk at State Key Laboratory for Novel Software Technology, Nanjing University, Deep Learning at Scale from the Perspectives of Data, Model and Platform. 2018

Invited talk at ICCV 2017 Workshop on Web-Scale Vision and Social Media, Learning Visual N-Grams from Web Data 2017

Yahoo Research New York, Minimizing Human Efforts in Vision and Learning 2017

Oculus Research, Redmond WA, Minimizing Human Efforts in Vision and Learning 2017

UMD Graduate Research Appreciation Day, Minimizing Human Efforts in Vision and Learning 2017

Comcast Labs, Washington DC, Planar Structure Matching Under Projective Uncertainty for Geolocation 2015

University of Maryland, Computer Vision Student Seminar, Planar Structure Matching Under Projective Uncertainty for Geolocation 2014

Poster at ICCV 2017, Learning Visual N-Grams from Web Data 2017

Invited poster at CVPR 2017 Vision meets Cognition Workshop, Generating Holistic 3D Scene Abstractions for Text-based Image Retrieval 2017

Invited poster at CVPR 2017 Bridges to 3D Workshop, Generating Holistic 3D Scene Abstractions for Text-based Image Retrieval 2017

Poster at CVPR, Generating Holistic 3D Scene Abstractions for Text-based Image Retrieval 2017

Demo/Poster at ICDE 2017, ModelHub: Deep Learning Lifecycle Management 2017

Poster at Amazon Computer Vision Day, Seattle, Selective Encoding for Recognizing Unreliably Localized Faces 2015

Poster at Amazon Graduate Research Symposium, Seattle, WA, Planar Structure Matching Under Projective Uncertainty for Geolocation 2014

Poster at ECCV 2010, Discriminative Nonorthogonal Binary Subspace Tracking 2010

# References

Larry S. Davis, Professor, University of Maryland

Rama Chellappa, Professor, University of Maryland

Laurens van der Maaten, Research Scientist, Facebook AI Research

Other references available upon request.

Last updated: September 6, 2019