

# Li, Ang

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## Education

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

DeepMind, Mountain View CA, Research Scientist	2017–present
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

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

<i>27th Place, World Finals of ACM Int'l Collegiate Programming Contest, St. Petersburg, Russia</i>	2013
<i>UPE First to Solve Problem J Award, ACM/ICPC World Finals, St. Petersburg, Russia</i>	2013
<i>Champion, ACM Int'l Collegiate Programming Contest Regional Mid-Atlantic, United States</i>	2012
<i>Meritorious Winner, Mathematical Contest in Modeling, United States</i>	2010
<i>49th Place, World Finals of ACM Int'l Collegiate Programming Contest, Stockholm, Sweden</i>	2009
<i>First Prize Nationwide, Contemporary Undergraduate Mathematical Contest in Modeling, China</i>	2008

## Activities

<i>Coach for University of Maryland ACM/ICPC team</i>	2014
<i>Problem Developer for 23rd Maryland Annual High School Programming Contest</i>	2013
<i>Director at the 7th Nanjing Univeristy Local Programming Contest, Nanjing</i>	2009

## Academic Services

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
Program Committee Member, IEEE Conf. on Computer Vision and Pattern Recognition	2017, 2018
Program Committee Member, International Conference on Machine Learning	2017, 2018
Program Committee Member, European Conference on Computer Vision	2018
Reviewer, IEEE International Conference on Computer Vision	2017
Reviewer, International Conference on Learning Representations	2018
Reviewer, Annual Conference on Neural Information Processing Systems	2017, 2018
Reviewer, Asian Conference on Computer Vision	2018

## 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

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)*. Honolulu, 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

R. Yu, H. Wang, A. Li, J. Zheng, V. I. Morariu, L. S. Davis. Representing Videos based on Scene Layouts for Recognizing Agent-in-Place Actions. Preprint.

### 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 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 Presentations

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

## Projects

Image retrieval based on locality sensitive hashing.	2009-2010
Recognizing animal categories in images.	2009-2010
Object tracking based on binary features.	2010-2011
Facial pose estimation for driver's fatigue detection.	2011-2012
Multimedia event detection.	2011-2012
Image based geolocation.	2012-2013
Smartphone active face authentication.	2013-2014
Three dimensional hand tracking from depth sequences.	2014
Large scale face verification.	2014-2016
Multi-view multi-class street sign classification in streetview images.	2015
Text based image retrieval for indoor scenes.	2015-2016
Deep learning lifecycle management.	2015-2016
Scene classification in baseball sport videos.	2016
Learning visual representations of phrases from large scale web data.	2016
Visual relationship detection.	2016-2017
Referring expression comprehension and generation.	2016-2017

## 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: July 29, 2018