

# Hadi Kiapour

---

## CONTACT INFORMATION

199 Fremont St, CB 1.6.116  
San Francisco, CA 94105  
hadi@cs.unc.edu

[www.hadikiapour.com](http://www.hadikiapour.com)  
[Google Scholar](#)  
[LinkedIn](#)

## RESEARCH INTERESTS

I work on fundamental and applied research in computer vision and machine learning fields. I'm passionate about identifying and solving challenging science problems that bridge the gap between academic research and scalable solutions that reach the public. I'm interested in all aspects of computer vision, deep learning and natural language processing. My research often involves analyzing massive amounts of data to develop algorithms that turn computers into experts in visual understanding, with visual fashion recognition at the forefront.

## EDUCATION

University of North Carolina at Chapel Hill Dec. 2015  
Doctor of Philosophy in Computer Science  
Dissertation: Large Scale Visual Recognition of Clothing, People and Styles  
Advisor: [Tamara L. Berg](#)

Sharif University of Technology Jun. 2011  
B.Sc. in Electrical Engineering, Control Systems

## PUBLICATIONS

[Every Brand is a Story: Going beyond Logos in Fashion Brands by Visual Understanding.](#)  
Hadi Kiapour, Robinson Piramuthu  
(Under review) 2018.

[Conditional Image-Text Embedding Networks.](#)

Bryan A. Plummer, Paige Kordas, Hadi Kiapour, Shuai Zheng, Robinson Piramuthu, Svetlana Lazebnik  
(Under review) [arXiv](#) 2018.

[Twenty Questions Game: Finding Images using Human-in-the-loop Feedback.](#)

Bryan A. Plummer, Hadi Kiapour, Shuai Zheng, Robinson Piramuthu  
(Under review) 2018.

[Visual Search at eBay.](#) Fan Yang, Ajinkya Kale, Yury Bubnov, Leon Stein, Qiaosong Wang, Hadi Kiapour, Robinson Piramuthu

ACM SIGKDD Conference on Knowledge Discovery and Data Mining. [KDD 2017.](#)  
Halifax, Nova Scotia, Canada.

[Where to Buy It: Matching Street Clothing Photos to Online Shops.](#)

Hadi Kiapour, Xufeng Han, Svetlana Lazebnik, Alexander C. Berg, Tamara L. Berg  
IEEE International Conference on Computer Vision. [ICCV 2015.](#)  
Santiago, Chile. **(Oral Presentation)**

[Mine the Fine: Fine-Grained Fragment Discovery.](#)

Hadi Kiapour, Wei Di, Vignesh Jagadeesh, Robinson Piramuthu  
IEEE International Conference on Image Processing. [ICIP 2015.](#)  
Québec city, Canada.

Hipster Wars: Discovering Elements of Fashion Styles.  
Hadi Kiapour, Kota Yamaguchi, Alexander C. Berg, Tamara L. Berg  
European Conference on Computer Vision. ECCV 2014.  
Zurich, Switzerland.

Materials Discovery: Fine-Grained Classification.  
Hadi Kiapour, Kevin Yager, Alexander C. Berg, Tamara L. Berg  
IEEE Winter Conference on Applications of Computer Vision. WACV 2014.  
Steamboat Springs, CO.

Retrieving Similar Styles to Parse Clothing.  
Kota Yamaguchi, Hadi Kiapour, Luis E. Ortiz, Tamara L. Berg  
IEEE Transactions on Pattern Analysis and Machine Intelligence. TPAMI 2014.  
(Journal Paper)

Paper Doll Parsing: Retrieving Similar Styles to Parse Clothing Items.  
Kota Yamaguchi, Hadi Kiapour, Tamara L. Berg  
IEEE International Conference on Computer Vision. ICCV 2013.  
Sydney, Australia.

Parsing Clothing in Fashion Photographs.  
Kota Yamaguchi, Hadi Kiapour, Luis E. Ortiz, Tamara L. Berg  
International Conference on Computer Vision and Pattern Recognition. CVPR 2012.  
Providence, RI.

Analysis, Interpretation, and Recognition of Facial Action Units and Expressions Using Neuro-Fuzzy Modeling. M. Khademi, Hadi Kiapour, M. Manzuri, A. Kiaei  
Artificial Neural Networks in Pattern Recognition. ANNPR 2010.

Recognizing Combinations of Facial Action Units with Different Intensity Using a Mixture of Hidden Markov Models and Neural Networks.  
M. Khademi, M. Manzuri, Hadi Kiapour, A. Kiaei  
Multiple Classifier Systems MCS 2010.

RESEARCH  
EXPERIENCE

eBay, San Francisco, California. 2016 - Present

*Research Scientist in the Computer Vision Group*

- Tech lead for Shop The Look project at eBay.
- Key contributor of visual search in eBay ShopBot and Close5.
- Leading research on visual fashion recognition and fine-grained classification.
- Computer vision lead for inline shopping experience at New Product Development.
- Deployment and maintenance of deep learning services on Google Cloud.
- Mentorship of internship projects on attribute recognition using semi-supervised data, multimodal search and active image search with reinforcement learning and generative adversarial networks.

The University of North Carolina at Chapel Hill, North Carolina. 2013 - 2015

*Research Assistant at the Computer Science Department*

Performed research in visual recognition of fashion styles and street to shop clothing image retrieval in large scale datasets collected from web in the research group of Prof. Tamara L. Berg, and worked closely with Prof. Alexander C. Berg and Prof. Svetlana Lazebnik.

Stony Brook University (SUNY), Stony Brook, New York. 2011 - 2013

*Research Assistant at the Vision and Digital Media Lab*

Performed research in large scale semantic parsing of clothing in fashion street images. I was part of the research group of Prof. Tamara L. Berg and worked closely with Prof. Kota Yamaguchi and Prof. Luis E. Ortiz.

eBay, San Jose, California. Summer 2015  
*Research Intern*  
Worked on semantic embeddings that jointly model images and text data with skip-grams.

eBay, San Jose, California. Summer 2014  
*Research Intern at eBay Research Labs*  
Worked on fine-grained object classification using mid-level representation learning.

Royal Institute of Technology (KTH), Stockholm, Sweden. Spring & Summer 2010  
*Visiting Researcher at Computer Vision and Active Perception Laboratory*  
Worked on spatial modeling from 2D indoor scene images. I was advised by Prof. Stefan Carlsson and Prof. Jan-Olof Eklundh.

Institute for Research in Fundamental Sciences (IPM), Tehran, Iran. 2009 - 2011  
*Visiting Researcher at Computer Vision and Active Perception Laboratory*  
Performed research on object detection. Under supervision of Prof. Mehrdad Shahshahani and worked with Prof. Ali Farhadi.

Sharif University of Technology, Tehran, Iran. 2009 - 2010  
*Research Student at the Digital Signal Processing Laboratory*  
Performed research on facial action recognition using hidden markov models and neural networks. Under supervision of professor M. T. Manzuri.

## PATENTS

Fine-Grained Categorization Issued. US Patent No. 9818048.	Nov. 2017
Camera Platform Incorporating Schedule and Stature Application Number: 15/859,056.	Dec. 2017
Camera Platform and Object Inventory Control Application Number: 15/858,463	Dec. 2017
Computer Vision Application Number: 62/612,275.	Dec. 2017
Anchored Search Application Number: PCT/US2017/064663	Dec. 2017
Anchored Search Application Number: 15/832,145	Dec. 2017
Projecting Visual Aspects into a Vector Space Application Number: PCT/US2017/062299	Nov. 2017
Crowd Assisted Query System Application Number: PCT/US2017/060292	Nov. 2017
Image Analysis and Prediction Based Visual Search Application Number: PCT/US2017/056532	Oct. 2017
Parallel Prediction of Multiple Image Aspects Application Number: PCT/US2017/056521	Oct. 2016
Personal Assistant with Offline Visual Search Database Application Number: PCT/US2017/056079.	Oct. 2017

Personal Assistant with Visual Multi-turn Dialog Application Number: PCT/US2017/056116.	Oct. 2017
Camera Platform and Object Inventory Control Application Number: 62/558,836	Sep. 2017
Determining an Item that has Confirmed Characteristics Application Number: PCT/US17/45948	Aug. 2017
Visual Aspect Localization Presentation Application Number: 15/465,883	Mar. 2017
Projecting Visual Aspects into a Vector Space Application Number: 15/353,900	Nov. 2016
Crowd Assisted Query System Application Number: 15/345,627	Nov. 2016
Intelligent Online Personal Assistant with Multi-turn Dialog based on Visual Search Application Number: 15/294,765	Oct. 2016
Parallel Prediction of Multiple Image Aspects Application Number: 15/294,762	Oct. 2016
Image Analysis and Prediction Based Visual Search Application Number: 15/294,773	Oct. 2016
Intelligent Online Personal Assistant with Offline Visual Search Database Application Number: 15/294,767	Oct. 2016
Determining an Item that has Confirmed Characteristics Application Number: 15/270,844	Aug. 2017

MEDIA  
COVERAGE AND  
PRESS  
RELEASE

How Ebay uses employee pet projects to launch into new initiatives like AR and VR. Business Journals, Sep. 18, 2017.  
<https://www.bizjournals.com/sanjose/news/2017/09/18/ebay-employee-projects-expo-ar-vr-initiatives.html>

This eBay ShopBot knows what you like and feeds you trendy suggestions. VentureBeat, Jul. 12, 2017.  
<https://venturebeat.com/2017/07/12/this-ebay-shopbot-knows-what-you-like-and-feeds-you-trendy-suggestions/>

eBay ShopBot in Pictureland. Medium, Dec. 6, 2016.  
<https://medium.com/@robinsonpiramuthu/ebay-shopbot-in-pictureland-3d577a40b5c8>

eBay teams up with Facebook Messenger to launch shopping bot. Engadget, Oct. 19, 2016.  
<https://www.engadget.com/2016/10/19/ebay-shopbot-facebook-messenger-bot/>

The new ShopBot bot on Messenger searches eBay for you. TechCrunch, Oct. 18, 2016.  
<https://techcrunch.com/2016/10/18/the-new-shopbot-bot-on-messenger-searches-ebay-for-you/>

Ebay's New Shopbot On Facebook Messenger Aids Contextual Search. Forbes, Oct. 18, 2016.  
<https://www.forbes.com/sites/rachelarthur/2016/10/18/ebays-new-shopbot-on-facebook-messenger-aids-contextual-search>

TEACHING  
EXPERIENCE

<i>Teaching Assistant</i>	
CSE 373: Analysis of Algorithms. Stony Brook University	Spring 2013
CSE 214: CS II, Data Structures Using Java. Stony Brook University	Spring 2012
CSE 102: Intro. to Web Design and Programming. Stony Brook University	Spring 2012
CSE 220: Systems-Level Programming. Stony Brook University	Fall 2011
CSE 308: Software Engineering. Stony Brook University	Fall 2011

PROFESSIONAL ACTIVIES	<p><i>Journal Reviewer</i></p> <p>IEEE Transactions on Multimedia 2018</p> <p>IEEE Transactions on Pattern Analysis and Machine Intelligence (TPAMI) 2017</p> <p>IEEE Transactions on Multimedia 2017</p> <p>ACM Transactions on Multimedia Computing Communications and Applications 2017</p> <p>IEEE Transactions on Pattern Analysis and Machine Intelligence (TPAMI) 2016</p> <p>IEEE Transactions on Multimedia 2015</p> <p>IEEE Transactions on Multimedia 2014</p> <p><i>Program Committee or Reviewer for Conferences</i></p> <p>Asian Conference on Computer Vision (ACCV) 2018</p> <p>European Conference on Computer Vision (ECCV) 2018</p> <p>IEEE Conference on Computer Vision and Pattern Recognition (CVPR) 2018</p> <p>International Conference on Computer Vision - Computer Vision for Fashion Workshop 2017</p> <p>IEEE Conference on Computer Vision and Pattern Recognition (CVPR) 2017</p> <p>International Conference on Computer Vision (ICCV) 2017</p> <p>ACM SIGGRAPH (Computer GRAPHics and Interactive Techniques) 2016</p> <p>IEEE Conference on Computer Vision and Pattern Recognition (CVPR) 2016</p> <p>European Conference on Computer Vision (ECCV) 2016</p> <p>IEEE Student Member</p>
AWARDS AND HONORS	<p>Critical Talent Award, awarded to the top 5% of performing employees company-wide. 2018</p> <p>Promoted to Research Scientist II, eBay 2018</p> <p>Honorable Mention Award at eBay's International Innovation Expo. 2017</p> <p>Nominated for the Culture Luminary Awards at eBay. 2017</p> <p>Awarded oral presentation at ICCV 2015, Chile (top 3.3%). 2015</p> <p>Best poster award, Graduate Research Conference, Stony Brook University. 2012</p> <p>Computer science fellowship, Stony Brook University, NY, USA. 2011-2012</p> <p>Full research scholarship, Royal Institute of Technology (KTH), Stockholm, Sweden. 2010</p> <p>Ranked 74<sup>th</sup> out of over 400,000 participants in Iran's university entrance exam. 2006</p> <p>Qualified for the 2<sup>nd</sup> round of national olympiad of mathematics. 2004</p> <p>Qualified for the 2<sup>nd</sup> round of national olympiad of informatics. 2004</p> <p>Admitted to national exceptional talents (NODET), top 1% nationally, Iran. 2003</p>
INTERNS AND ADVISEES	<p>Tianlu Wang, <i>PhD Student, eBay Intern.</i> 2017</p> <p>Bryan A. Plummer, <i>PhD Student, eBay Intern.</i> 2017</p> <p>Omid Pourseed, <i>PhD Student, eBay Intern.</i> 2017</p> <p>Licheng Yu, <i>PhD Student, eBay Intern.</i> 2017</p> <p>Sebo Kim, <i>Undergrad.</i> 2013</p> <p>Kimia Tajik, <i>Undergrad.</i> 2011</p> <p>Neda Sabbaghpour, <i>Undergrad.</i> 2010</p>
OTHER ACTIVITIES	<p>Director of Science, Resana 2009 - 2010</p> <p>Resana Science is the name collectively given to collaborative research by the student community of the Department of Electrical Engineering, Sharif University of Technology.</p>
SELECTED SKILLS	<p><i>Languages:</i> English (full proficiency), Persian (native), Spanish (beginner)</p> <p><i>Programming Languages:</i> Python, C/C++, CUDA, JavaScript, HTML, CSS, Matlab</p> <p><i>Operating Systems:</i> Linux, macOS</p>

*Tools:* Tensorflow, Caffe, Keras, OpenCV, Git, Vim, LateX, Docker, Google Cloud Platform, Scikit-learn, Pandas, Libsvm, Liblinear, Puppet.