Hadi Kiapour

Contact Information

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

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) Coming soon on arXiv, 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) Coming soon on arXiv, 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
- 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 Goolge 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 Nov. 2017
Issued. US Patent No. 9818048.

Camera Platform Incorporating Schedule and Stature Dec. 2017
Application Number: 15/859,056.

Camera Platform and Object Inventory Control Dec. 2017
Application Number: 15/858,463

Computer Vision Dec. 2017
Application Number: 62/612,275.

Anchored Search Dec. 2017
Application Number: PCT/US2017/064663

Anchored Search Dec. 2017
Application Number: 15/832,145

Projecting Visual Aspects into a Vector Space Nov. 2017
Application Number: PCT/US2017/062299

Crowd Assisted Query System Nov. 2017
Application Number: PCT/US2017/060292

Image Analysis and Prediction Based Visual Search Oct. 2017
Application Number: PCT/US2017/056532

Parallel Prediction of Multiple Image Aspects Oct. 2016
Application Number: PCT/US2017/056521

Personal Assistant with Offline Visual Search Database Oct. 2017
Application Number: PCT/US2017/056079.

Personal Assistant with Visual Multi-turn Dialog Oct. 2017
Application Number: PCT/US2017/056116.

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

Teaching Assistant

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
Principles of Electrical Engineering. Sharif University of Technology	Fall 2008

Professional Activies

Journal Reviewer

IEEE Transactions on Multimedia 2018
IEEE Transactions on Pattern Analysis and Machine Intelligence (TPAMI) 2017
IEEE Transactions on Multimedia 2017
ACM Transactions on Multimedia Computing Communications and Applications 2017
IEEE Transactions on Pattern Analysis and Machine Intelligence (TPAMI) 2016
IEEE Transactions on Multimedia 2015
IEEE Transactions on Multimedia 2014

Program Committee or Reviewer for Conferences

European Conference on Computer Vision (ECCV) 2018
IEEE Conference on Computer Vision and Pattern Recognition (CVPR) 2018
International Conference on Computer Vision - Computer Vision for Fashion Worksop 2017
IEEE Conference on Computer Vision and Pattern Recognition (CVPR) 2017
International Conference on Computer Vision(ICCV) 2017
ACM SIGGRAPH (Computer GRAPHics and Interactive Techniques) 2016
IEEE Conference on Computer Vision and Pattern Recognition (CVPR) 2016
European Conference on Computer Vision (ECCV) 2016
IEEE Student Member

Awards and Honors

Critical Talent Award, awarded to the top 5% of performing employees company-wide. 2018
Promoted to Research Scientist II, eBay 2018
Honorable Mention Award at eBay's International Innovation Expo. 2017
Nominated for the Culture Luminary Awards at eBay. 2017
Awarded oral presentation at ICCV 2015, Chile (top 3.3%). 2015
Best poster award, Graduate Research Conference, Stony Brook University. 2012
Computer science fellowship, Stony Brook University, NY, USA. 2011-2012
Full research scholarship, Royal Institute of Technology (KTH), Stockholm, Sweden. 2010
Ranked 74^{th} out of over $400,000$ participants in Iran's university entrance exam. 2006
Qualified for the 2^{nd} round of national olympiad of mathematics. 2004
Qualified for the 2^{nd} round of national olympiad of informatics. 2004
Admitted to national exceptional talents (NODET), top 1% nationally, Iran. 2003

Interns and Advisees

Bryan A. Plummer, *PhD, eBay Intern.* 2017
Omid Pourseed, *PhD, eBay Intern.* 2017
Licheng Yu, *PhD, eBay Intern.* 2017
Sebo Kim, *Undergrad.* 2013
Kimia Tajik, *Undergrad.* 2011
Neda Sabbaghpour, *Undergrad.* 2010

Other Activities

Director of Science, Resana 2009 - 2010
Resana Science is the name collectively given to collaborative research by the student community of the Department of Electrical Engineering, Sharif University of Technology.

Selected Skills

Languages: English (full proficiency), Persian (native), Spanish (beginner)
Programming Languages: Python, C/C++, CUDA, JavaScript, HTML, CSS, Matlab
Operating Systems: Linux, macOS
Tools: Tensorflow, Caffe, Keras, OpenCV, Git, Vim, LateX, Docker, Google Cloud Platform, Scikit-learn, Pandas, Libsvm, Liblinear, Puppet.