Vicente Ordónez-Román (publishes as Vicente Ordonez)

CONTACT 85 Engineer's Way vicente@virginia.edu INFORMATION Rice Hall 310, PO Box 400740 Phone: (631) 413-7794

Charlottesville, VA 22904 http://vicenteordonez.com

RESEARCH INTERESTS

My research lies at the intersection of computer vision, natural language processing and machine learning. I am especially interested in analyzing, and mining useful human insights from enormous amounts of images with associated text to improve visual recognition. I also research and advocate for fairness and accountability in machine learning applications.

CURRENT Assistant Professor 2016 - present

Position University of Virginia (UVA), Charlottesville, Virginia.

Department of Computer Science, School of Engineering and Applied Science. I am leading the Vision, Language and Learning Lab – https://www.vislang.ai.

EDUCATION The University of North Carolina at Chapel Hill (UNC) 2013 - 2015

Doctor of Philosophy in Computer Science

Thesis: Language and Perceptual Categorization in Computational Visual Recognition

Advisor: Tamara L. Berg

Stony Brook University, The State University of New York (SUNY) 2009 - 2013

Master of Science in Computer Science

Escuela Superior Politécnica del Litoral (ESPOL), Ecuador. 2003 - 2008

Computer Engineering Degree (GPA: 9.22/10.0)

HONORS Research Highlight of the Communications of the ACM, December 2020 Issue.

AND Facebook Research Award, 2020.

AWARDS Google Faculty Research Award, 2017.

IBM Faculty Award, 2017. Best Long Paper Award, 2017.

• Intl. Conf. on Empirical Methods in Natural Language Processing (EMNLP), 2017.

Research Highlight of the Communications of the ACM, March 2016 Issue.

Allen Institute for Artificial Intelligence Hackathon 2015 – Peer Favorite Award.

Best Paper Award – IEEE Marr Prize 2013.

• International Conference on Computer Vision (ICCV), 2013.

Yahoo! Key Scientific Challenges Award, 2012.

Renaissance Technologies Fellowship, 2009 - 2011.

Philantropic Society Medal, Guayaquil, Ecuador, 2007.

Best GPA in the Computer Engineering Program, ESPOL, 2004 - 2007.

OTHER EXPERIENCE Yarn Labs Inc, Cambridge, Massachusetts

September 2019 - March 2020

Independent Contractor

Research on the state of the field and regulation of facial recognition technologies, with funding from the MacArthur Foundation.

Adobe Research, College Park, Maryland.

Summer 2019

Visiting Professor, Document Intelligence Lab (DIL)

Pursuing projects at the intersection of Computer Vision and NLP for documents.

Allen Institute for Artificial Intelligence (AI2), Seattle, Washington.

2015 - 2016

Visiting Research Fellow, Computer Vision Group (now PRIOR)

Worked at the intersection of Vision and Language in the Computer Vision group.

Microsoft Research, Cambridge, Massachusetts.

Summer 2014

Research Intern, Computer Vision Group

Large scale data-driven scene parsing using deep learning features.

Mentors: Ce Liu and Michael Rubinstein.

eBay Research Labs, San Jose, California.

Summer 2013

Research Intern, Computer Vision Group

Analysis of furniture images as part of the Computer Vision group.

Mentors: Robinson Piramuthu and Vignesh Jagadeesh.

Google, Mountain View, California.

Summer 2011

Software Engineering Intern, Android Multimedia Content Analysis Group Automatic organization of personal image collections using visual features.

Mentors: Rodrigo Carceroni and Wei Hua.

Google, Mountain View, California.

Spring 2008, Summer 2008

Software Engineering Intern, Google Earth

Automated quality analysis of satellite images for Google Earth and Google Maps.

Mentor: Rodrigo Carceroni.

ACADEMIC EXPERIENCE The University of North Carolina at Chapel Hill

2013 - 2015

Research Assistant, Department of Computer Science Advised by Prof. Tamara Berg and also worked with professors Yejin Choi and Alex Berg.

Stony Brook University (SUNY), Stony Brook, New York.

2010 - 2013

Research Assistant, Vision and Digital Media Lab

Advised by Prof. Tamara Berg and also worked with professors Yejin Choi and Alex Berg.

Center for Information Technologies (ESPOL), Guayaquil, Ecuador.

2006 - 2009

Research Assistant, Technology Enhanced Learning Group

Research on technology for education under Prof. Xavier Ochoa.

WHITEPAPER

Facial Recognition Technologies in the Wild: A Call for a Federal Office.

Erik Learned-Miller, Vicente Ordóñez, Jamie Morgernstern, Joy Buolamwini.

May 2020. https://www.ajlunited.org/federal-office-call

Facial Recognition Technologies: A Primer.

Joy Buolamwini, Vicente Ordóñez, Jamie Morgernstern, Erik Learned-Miller.

May 2020. https://www.ajlunited.org/federal-office-call

PREPRINTS

Chair Segments: A Compact Benchmark for the Study of Object Segmentation.

Leticia Pinto-Alva, Ian K. Torres, Rosangel Garcia, Ziyan Yang, Vicente Ordonez

arxiv:2012.01250. December 2020. https://arxiv.org/abs/2012.01250

General Multi-label Image Classification with Transformers.

Jack Lanchantin, Tianlu Wang, Vicente Ordonez, Yanjun Qi.

arxiv:2011.14027. November 2020. https://arxiv.org/abs/2011.14027

VisualNews: Benchmark and Challenges in Entity-aware Image Captioning. Fuxiao Liu, Yinghan Wang, Tianlu Wang, Vicente Ordonez. arxiv:2010.03743. October 2020. https://arxiv.org/abs/2010.03743

Black-box Explanation of Object Detectors via Saliency Maps. Vitali Petsiuk, Rajiv Jain, Varun Manjunatha, Vlad I. Morariu, Ashutosh Mehra, Vicente Ordonez, Kate Saenko. arXiv:2006.03204. June 2020. https://arxiv.org/abs/2006.03204

EyeCar: Modeling the Visual Attention Allocation of Drivers in Semi-Autonomous Vehicles. Sonia Baee, Erfan Pakdamanian, Vicente Ordonez, Inki Kim, Lu Feng, Laura Barnes. arXiv:1912.07773. December 2019. https://arxiv.org/abs/1912.07773

Moviescope: Large-scale Analysis of Movies using Multiple Modalities. Paola Cascante-Bonilla, Kalpathy Sitaraman, Mengjia Luo, Vicente Ordonez. arXiv:1908.03180. August 2019. https://arxiv.org/abs/1908.03180

PUBLICATIONS

Curriculum Labeling: Revisiting Pseudo-Labeling for Semi-Supervised Learning. Paola Cascante-Bonilla, Fuwen Tan, Yanjun Qi, Vicente Ordonez. The 35th AAAI Conference on Artificial Intelligence. AAAI 2021.

Enabling AI at the edge with XNOR Networks. Mohammad Rastegari, Vicente Ordonez, Joseph Redmon, Ali Farhadi. Communications of the ACM. December 2020 Vol 63, No. 12. CACM 2020. (Research Highlight, Invited Paper)

Using Visual Feature Space as a Pivot Across Languages. Ziyan Yang, Leticia Pinto-Alva, Franck Dernoncourt, Vicente Ordonez. Findings of the Association for Computational Linguistics: EMNLP 2020.

Double-Hard Debias: Tailoring Word Embeddings for Gender Bias Mitigation. Tianlu Wang, Xi Victoria Lin, Nazneen Fatema Rajani, Bryan McCann, Vicente Ordonez, Caiming Xiong. Association for Computational Linguistics. ACL 2020.

Generative-discriminative Feature Representations for Open-set Recognition. Pramuditha Perera, Vlad I. Morariu, Rajiv Jain, Varun Manjunatha, Curtis Wigington, Vicente Ordonez, and Vishal M. Patel. Conf. on Computer Vision and Pattern Recognition. CVPR 2020.

Testing DNN Image Classifiers for Confusion & Bias Errors. Yuchi Tian, Ziyuan Zhong, Vicente Ordonez, Gail Kaiser, Baishakhi Ray. International Conference on Software Engineering. ICSE 2020.

Drill-down: Interactive Retrieval of Complex Scenes using Natural Language Queries . Fuwen Tan, Paola Cascante-Bonilla, Hui Wu, Xiaoxiao Guo, Song Feng, Vicente Ordonez. Conf. on Neural Information Processing Systems. NeurIPS 2019. Vancouver, Canada.

Balanced Datasets Are Not Enough: Estimating and Mitigating Gender Bias in Deep Image Representations . Tianlu Wang, Jieyu Zhao, Mark Yatskar, Kai-Wei Chang, Vicente Ordonez. International Conference on Computer Vision. ICCV 2019. Seoul, South Korea.

Text2Scene: Generating Compositional Scenes from Textual Descriptions. Fuwen Tan, Song Feng, Vicente Ordonez. Conf. on Computer Vision and Pattern Recognition. CVPR 2019. Long Beach, California. (Oral Presentation – Best Paper Finalist – top ~ 1% of submissions)

Chat-crowd: A Dialog-based Platform for Visual Layout Composition.
Paola Cascante-Bonilla, Xuwang Yin, Vicente Ordonez, Song Feng.
North American Chapter of the Association for Computational Linguistics. NAACL 2019.
System Demonstrations Track. Minneapolis, Minnesota.

Gender Bias in Contextualized Word Embeddings.

Jieyu Zhao, Tianlu Wang, Mark Yatskar, Ryan Cotterell, Vicente Ordonez, Kai-Wei Chang. North American Chapter of the Association for Computational Linguistics. NAACL 2019. short. Minneapolis, Minnesota. (Oral Presentation)

Deep Feature Aggregation and Image Re-ranking with Heat Diffusion for Image Retrieval. Shanmin Pang, Jin Ma, Jianru Xue, Jihua Zhu, Vicente Ordonez. IEEE Transactions on Multimedia 2019. (Journal Paper)

Feedback-prop: Convolutional Neural Network Inference under Partial Evidence. Tianlu Wang, Kota Yamaguchi, Vicente Ordonez. Conf. on Computer Vision and Pattern Recognition. CVPR 2018. Salt Lake City, Utah.

Gender Bias in Coreference Resolution: Evaluation and Debiasing Methods. Jieyu Zhao, Tianlu Wang, Mark Yatskar, Vicente Ordonez, Kai-Wei Chang. North American Chapter of the Association for Computational Linguistics. NAACL 2018. short. New Orleans, Louisiana.

Building Discriminative CNN Image Representations for Object Retrieval using the Replicator Equation. Shanmin Pang, Jihua Zhu, Jiaxing Wang, Vicente Ordonez, Jianru Xue. Pattern Recognition 2018. Volume 83. Pages 150-160. Accepted April 2018. (Journal Paper)

Where and Who? Automatic Semantic-Aware Person Composition. Fuwen Tan, Crispin Bernier, Benjamin Cohen, Vicente Ordonez, Connelly Barnes. Winter Conference on Applications of Computer Vision WACV 2018. Lake Tahoe, NV.

Men Also Like Shopping: Reducing Gender Bias Amplification using Corpus-level Constraints . Jieyu Zhao, Tianlu Wang, Mark Yatskar, Vicente Ordonez, Kai-Wei Chang. Empirical Methods on Natural Language Processing. EMNLP 2017. Copenhagen, Denmark. (Oral Presentation) (Best Paper Award)

Obj2Text: Generating Visually Descriptive Language from Object Layouts . Xuwang Yin, Vicente Ordonez. Empirical Methods on Natural Language Processing. EMNLP 2017. Copenhagen, Denmark. (Oral Presentation)

Commonly Uncommon: Semantic Sparsity in Situation Recognition. Mark Yatskar, Vicente Ordonez, Luke Zettlemoyer, Ali Farhadi. Int. Conf. on Computer Vision and Pattern Recognition. CVPR 2017. Honolulu, Hawaii. XNOR-Net: ImageNet Classification Using Binary Convolutional Neural Networks. Mohammad Rastegari, Vicente Ordonez, Joseph Redmon, Ali Farhadi. European Conference on Computer Vision. ECCV 2016. Amsterdam, Netherlands. (Oral presentation)

Stating the Obvious: Extracting Visual Common Sense Knowledge.

Mark Yatskar, Vicente Ordonez, Ali Farhadi. North American Chapter of the Association of Computational Linguistics. NAACL 2016. short. San Diego, CA (Oral presentation)

Learning to Name Objects. Vicente Ordonez, Wei Liu, Jia Deng, Yejin Choi, Alexander C. Berg, Tamara L. Berg. Communications of the ACM. March 2016. Vol 59, No. 3. CACM 2016. (Research Highlight, Invited Paper)

Large Scale Retrieval and Generation of Image Descriptions.

V. Ordonez, X. Han, P. Kuznetsova, G. Kulkarni, M. Mitchell, K. Yamaguchi, K. Stratos, A. Goyal, J. Dodge, A. Mensch, H. Daume III, A.C. Berg, Y. Choi, T.L. Berg. International Journal of Computer Vision. Special Issue on Big Data. IJCV 2016.

Predicting Entry-Level Categories. Vicente Ordonez, Wei Liu, Jia Deng, Yejin Choi, Alexander C. Berg, Tamara L. Berg. International Journal of Computer Vision - Marr Prize Special Issue. IJCV 2015. (Journal Paper)

ReferitGame: Referring to Objects in Photographs of Natural Scenes. Sahar Kazemzadeh, Vicente Ordonez, Mark Matten, Tamara L. Berg Empirical Methods on Natural Language Processing. EMNLP 2014. Doha, Qatar. (Oral presentation)

Learning High-level Judgments of Urban Perception. Vicente Ordonez, Tamara L. Berg European Conference on Computer Vision. ECCV 2014. Zurich, Switzerland.

TreeTalk: Composition and Compression of Trees for Image Descriptions. Polina Kuznetsova, Vicente Ordonez, Tamara L. Berg, Yejin Choi. Transactions of the Association of Computational Linguistics. TACL 2014 Presented at EMNLP 2014. Doha, Qatar. (Oral Presentation, Journal Paper)

FurnitureGeek: Understanding Fine-Grained Furniture Attributes from Freely Associated Text and Tags. Vicente Ordonez, Vignesh Jagadeesh, Wei Di, Anurag Bhardwaj, Robinson Piramuthu. IEEE Winter Conference on Applications of Computer Vision. WACV 2014. Steamboat Springs, CO

From Large Scale Image Categorization to Entry Level Categories. Vicente Ordonez, Jia Deng, Yejin Choi, Alexander C. Berg, Tamara L. Berg. IEEE International Conference on Computer Vision. ICCV 2013. Sidney, Australia. (Oral presentation) (Best Paper Award - Marr Prize) (Selected for publication in the Research Highlights of the Communications of the ACM Magazine)

Generalizing Image Captions for Image-Text Parallel Corpus. Polina Kuznetsova, Vicente Ordonez, Alexander C. Berg, Tamara L. Berg, Yejin Choi. Association for Computational Linguistics. ACL 2013. short. Sofia, Bulgaria. Babytalk: Understanding and Generating Image Descriptions. G. Kulkarni, V. Premraj, V. Ordonez, S. Dhar, S. Li, Y. Choi, A. C. Berg, T. L. Berg. IEEE Transactions on Pattern Analysis and Machine Intelligence. TPAMI 2013. (Journal paper)

Collective Generation of Natural Image Descriptions.
Polina Kuznetsova, Vicente Ordonez, Alexander C. Berg, Tamara L. Berg, Yejin Choi.
Association for Computational Linguistics. ACL 2012. Jeju, South Korea.
(Oral presentation)

Im2Text: Describing Images Using 1 Million Captioned Photographs. Vicente Ordonez, Girish Kulkarni, Tamara L. Berg. Neural Information Processing Systems. NeurIPS 2011. Granada, Spain. (Spotlight presentation)

High Level Describable Attributes for Predicting Aesthetics and Interestingness. Sagnik Dhar, Vicente Ordonez, Tamara L. Berg. IEEE Computer Vision and Pattern Recognition. CVPR 2011. Colorado Springs, CO.

The Ariadne Infrastructure for Managing and Storing Metadata. S. Ternier, G. Parra, B. Vandeputte, K. Verbert, J. Klerkx, E. Duval, V. Ordonez, X. Ochoa. Emerging Internet Technologies and Applications for E-learning. IEEE Internet Computing 2009. (Journal paper)

PATENTS

Techniques for automatic photo album generation. Google – Android. Vicente Ordonez, Wei Hua, Rodrigo L. Carceroni, Jennifer Gillenwater, Amarnag Subramanya. US Patent No. 8983193. (2015).

Correlating image annotations with foreground features. eBay Inc. Anurag Bhardwaj, Robinson Piramuthu, Vicente Ordonez, Vignesh Jagadeesh, Wei Di. US Patent Application No. 20150067471. (2015).

EXTERNAL FUNDING

Total: \$460,980

Facebook Research Award 2020

Project: On-Device Efficient Neural Networks \$75,000 as PI (Unrestricted Gift Funding)

eBay Research Gift Funding 2020 Project: Object-specific Image Retrieval \$48,843 as PI (Unrestricted Gift Funding)

Adobe Research Gift Funding

Project: Vision, Language and Multi-lingual Reasoning

\$5,000 in 2019 + \$30,000 in 2020 + \$7,500 in 2021 as PI (Unrestricted Gift Funding)

Google Cloud Credits for Research 2020.

\$5,000 Cloud Credits, as PI.

Leidos Gift Funding, 2019.

Project: Component-based Reasoning for Image Recognition

\$50,000 as PI.

SAP Gift Funding 2018 \$23,000, as PI (Unrestricted Gift Funding)

SAP Research Contract 2018.

Project: Efficient Deep Learning through Compact Representations. \$50,000, as PI.

SAP Research Contract 2018.

Project: Spatial Reasoning for Visually Grounded Dialogs. \$50,000 as PI.

Google Cloud Credits for Research 2019. \$16,500 Cloud Credits, as PI.

Google Faculty Research Award 2017. Project: Mitigating Biases in Visual Recognition \$49,700 + \$10,437 Cloud Credits, as PI (Unrestricted Gift Funding).

IBM Faculty Award 2017. Project: Interactive Dialog for Image Retrieval and Synthesis \$40,000, as PI (Unrestricted Gift Funding)

INTERNAL FUNDING

Total: \$25,000 (for our group).

4-VA Research Program 2019 (co-PI with Jia-Bin Huang – Virginia Tech). Mitigating Bias for Interpretable Human Activity Understanding. \$25,000 (\$5,000 for my research group).

3 Cavaliers Program 2019 (co-PI with Paul Humphreys and Chip Levy). Comparing and Contrasting Artificial Neural Networks with Biological Neural Networks for Improved Representation Learning. \$60,000 (\$20,000 for my research group).

SELECTED
MEDIA
COVERAGE /
PRESS
RELEASES

Biometrics experts call for creation of FDA-style government body to regulate facial recognition. Biometric Update. 06/08/2020. https://www.biometricupdate.com/202006/biometrics-experts-call-for-creation-of-fda-style-government-body-to-regulate-facial-recognition

Researchers call for new federal authority to regulate facial recognition tech. TechXplore. 06/05/2020. https://techxplore.com/news/2020-06-federal-authority-facial-recognition-tech.html

Racist facial recognition technology is being used by police at anti-racism protests. Verdict UK (VE). 06/05/2020. https://www.verdict.co.uk/facial-recognition-technology-racist-police-protests

Investigating the Best Features for Predicting a Movie's Genre and Estimated Budget. TechXplore. 30/08/2019. https://techxplore.com/news/2019-08-features-movie-genre.html

La equidad de género en los momentos de la IA. Forbes México. 01/10/2019. https://www.forbes.com.mx/la-equidad-de-genero-en-los-momentos-de-la-ia/

Researchers Combat Gender and Racial Bias in Artificial Intelligence. Bloomberg News. 12/04/2017. https://www.bloomberg.com/news/articles/2017-12-04/researchers-combat-gender-and-racial-bias-in-artificial-intelligence

Home robots will turn into crude sexists, experts warn. The Times of London. 08/23/2017. https://www.thetimes.co.uk/article/home-robots-will-turn-into-crude-sexists-experts-warn-gnmj09rgq

Machines Taught by Photos Learn a Sexist View of Women. WIRED. 08/21/2017. https://www.wired.com/story/machines-taught-by-photos-learn-a-sexist-view-of-women/

Beyond Silicon: Squeezing More Out of Chips. The New York Times. 10/30/2016. http://www.nytimes.com/2016/10/31/technology/beyond-silicon-squeezing-more-out-of-chips.html

Artificial Intelligence at Your Fingertips. University of Washington CSE News. 10/30/2016. https://news.cs.washington.edu/2016/10/31/uw-cse-and-ai2-in-the-new-york-times-artificial-intelligence-at-your-fingertips/

INVITED TALKS

Invited Speaker: Measuring and Mitigating Biases in Computer Vision and Beyond Rice University, Department of Computer Science Colloquium October 2020

Invited Speaker: Compositionality, Robustness, and Flexibility in Vision and Language Samsung Research, Cambridge, UK October 2020

Invited Speaker: Visual recognition on the edge through platform-aware model optimization Facebook AI Systems Faculty Summit

October 2020

Invited Speaker: Compositional Representations for Visual Recognition based on Language Carnegie Mellon University, VASC Seminar September 2020

Invited Speaker: Reunión Internacional de Inteligencia Artificial y sus Aplicaciones (RIIAA)
Intl. Conference on Artificial Intelligence and Applications.

August 2020

Invited Speaker: Fair and Compositional Representations for Vision and Language ICCV Workshop on Linguistics Meets Image and Video Retrieval. October 2019 Seoul, South Korea.

Invited Speaker: Building Compositional, Interpretable and Robust Visual Recognition Georgetown University - Dept. of Computer Science. Washington DC October 2019

Invited Speaker: Human-guided Visual Recognition with Language and Interaction SAP Leonardo Machine Learning Research Retreat. Berlin, Germany October 2019

Invited Speaker: Building Fair and Robust Representations for Vision and Language
Oak Ridge National Laboratory AI Workshop. Oak Ridge, TN.
September 2019

Seminar Speaker: Building Fair Representations for Images and Text
University of Maryland College-Park, CLIP Seminar Series
August 2019
Princeton University, Computer Science Dept. Fairness Seminar
April 2019

Invited Speaker: Building the Next Generation of Representations for Vision and Language Adobe Research, San José, California March 2019

Invited Speaker: Building the Next Generation of Representations for Vision and Language Escuela Superior Politécnica del Litoral, Guayaquil, Ecuador January 2019

Invited Speaker: Feedback Propagation in Deep Neural Networks SAP Leonardo Machine Learning Research Retreat. Munich, Germany Invited Speaker: Overcoming the Next Challenges in Vision and Language Research Microsoft Research Montreal. Montréal, Canada McGill University, Center for Intelligent Machines, Montréal, Canada August 2018 Mini-Plenary Speaker: Reducing Gender Bias in Machine Learning Systems National Center for Women & IT, NCWIT Summit. Grapevine, TX Invited Speaker: Understanding the Visual World through Language Applied Machine Learning Conference. Charlottesville, VA Tom Tom Founders Festival Keynote Speaker: Integrating Vision and Language through Feedback-based Neural Inference Conference on Integrating Vision and Language (IV&L Net) Invited Speaker, Investigación en Reconocimiento Visual Artificial Universidad Técnica de Machala (UTM), Machala, Ecuador. May 2017 Invited Speaker, Language and Perceptual Categorization in Computer Vision. Toyota Technological Institute at Chicago TTI-C Allen Institute for Artificial Intelligence AIZ, Seattle, Washington California Institute of Technology (Caltech), Pasadena, California Carnegie Mellon University, The Robotics Institute VASC Seminar Series Disney Research Pittsburgh, The Walt Disney Company. Stanford University, Computer Science Dept. Charlottesville, Virginia Virginia Tech, Computer Science Dept. Philadelphia, Pennsylvania Invited Presentation, Learning High-level Judgments of Urban Perception. September 2014 ECCV 2014 Workshop on Storytelling with Images and Videos. Zurich ECCV 2014 Workshop on Human-Machine Communication for Visual Recognition. Zurich Invited Speaker, Understanding Image Descriptions in the Wild. Yahoo! Labs, Sunnyvale, California. Invited Student Speaker, Data-driven Generation of Image Descriptions. NAACL Workshop on Vision and Language (WVL) 2013. Atlanta, GA GROUP Tianlu Wang, PhD Student — UVA Presidential Fellow 2019-2020 Fell 2019 - present Fall 2017 - present Fall 2019 - present Fall 2019 - present Fall 2019 - pre		Invited Speaker: Challenges in Vision and Language Research Workshop on Shortcomings in Vision and Language (SiVL) European Conference on Computer Vision (ECCV), Munich, Germany	September 2018
Microsoft Research Montreal, Montréal, Canada McGill University, Center for Intelligent Machines, Montréal, Canada Mini-Plenary Speaker: Reducing Gender Bias in Machine Learning Systems National Center for Women & IT, NCWIT Summit. Grapevine, TX Invited Speaker: Understanding the Visual World through Language Applied Machine Learning Conference. Charlottesville, VA Tom Tom Founders Festival Keynote Speaker: Integrating Vision and Language through Feedback-based Neural Inference Conference on Integrating Vision and Language (iV&L Net) Invited Speaker, Integrating Vision and Language (iV&L Net) Invited Speaker, Investigación en Reconocimiento Visual Artificial Universidad Técnica de Machala (UTM), Machala, Ecuador. Universidad Ge Cuenca (UC), Cuenca, Ecuador. Invited Speaker, Language and Perceptual Categorization in Computer Vision. Toyota Technological Institute at Chicago TTI-C Allen Institute for Artificial Intelligence AI2, Seattle, Washington California Institute of Technology (Caltech), Pasadena, California Carnegie Mellon University, The Robotics Institute VASC Seminar Series Disney Research Pittsburgh, The Walt Disney Company. Seminar Speaker, Integrating Vision and Language. University of Virginia, Computer Science Dept. Charlottesville, Virginia Virginia Tech, Computer Science Dept., Blacksburg, Virginia Invited Presentation, Learning High-level Judgments of Urban Perception. ECCV 2014 Workshop on Storytelling with Images and Videos. Zurich ECCV 2014 Workshop on Human-Machine Communication for Visual Recognition. Zurich Invited Speaker, Understanding Image Descriptions in the Wild. Yahoo! Labs, Sunnyvale, California. Invited Student Speaker, Data-driven Generation of Image Descriptions. NAACL Workshop on Vision and Language (WVL) 2013. Atlanta, GA GROUP Tianlu Wang, PhD Student – UVA Presidential Fellow 2019-2020 Fall 2016 - present Fuwen Tan, PhD Student Fall 2017 - present Fall 2017 - present Fuwen Tan, PhD Student Fall 2018 - present Fall 2019 - present Fuwen Tan, PhD Student Fall 2019 - present Fa			
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Conference on Integrating Vision and Language Processing, Tartu, Estonia European Network on Integrating Vision and Language (iV&L Net) Invited Speaker, Investigación en Reconocimiento Visual Artificial Universidad Técnica de Machala (UTM), Machala, Ecuador. May 2017 Invited Speaker, Language and Perceptual Categorization in Computer Vision. Toyota Technological Institute at Chicago TTI-C Allen Institute for Artificial Intelligence AI2, Seattle, Washington California Institute of Technology (Caltech), Pasadena, California Carnegie Mellon University, The Robotics Institute VASC Seminar Series Disney Research Pittsburgh, The Walt Disney Company. Stanford University, Department of Computer Science, Vision Group. Seminar Speaker, Integrating Vision and Language. University of Virginia, Computer Science Dept. Charlottesville, Virginia Tech, Computer Science Dept. Philadelphia, Pennsylvania Invited Presentation, Learning High-level Judgments of Urban Perception. ECCV 2014 Workshop on Storytelling with Images and Videos. Zurich ECCV 2014 Workshop on Human-Machine Communication for Visual Recognition. Zurich Invited Speaker, Understanding Image Descriptions in the Wild. Invited Speaker, Understanding Image Descriptions in the Wild. July 2013 Yahoo! Labs, Sunnyvale, California. Invited Student Speaker, Data-driven Generation of Image Descriptions. NAACL Workshop on Vision and Language (WVL) 2013. Atlanta, GA GROUP Tianlu Wang, PhD Student — UVA Presidential Fellow 2019-2020 Fall 2016 - present Fuwen Tan, PhD Student Fuwen Tan, PhD Student Fuwen Tan, PhD Student Fuwen Tan, PhD Student Fall 2017 - present Fall 2017 - present Fall 2017 - present Fall 2018 - present Fall 2019 - present		Applied Machine Learning Conference. Charlottesville, VA	April 2018
Universidad Técnica de Machala (UTM), Machala, Ecuador. May 2017 Universidad de Cuenca (UC), Cuenca, Ecuador. May 2017 Invited Speaker, Language and Perceptual Categorization in Computer Vision. Toyota Technological Institute at Chicago TTI-C Allen Institute for Artificial Intelligence A12, Seattle, Washington California Institute of Technology (Caltech), Pasadena, California Carnegie Mellon University, The Robotics Institute VASC Seminar Series Disney Research Pittsburgh, The Walt Disney Company. Stanford University, Department of Computer Science, Vision Group. Seminar Speaker, Integrating Vision and Language. University of Virginia, Computer Science Dept. Charlottesville, Virginia Virginia Tech, Computer Science Dept., Blacksburg, Virginia Drexel University, Computer Science Dept. Philadelphia, Pennsylvania Invited Presentation, Learning High-level Judgments of Urban Perception. ECCV 2014 Workshop on Storytelling with Images and Videos. Zurich ECCV 2014 Workshop on Human-Machine Communication for Visual Recognition. Zurich Invited Speaker, Understanding Image Descriptions in the Wild. Invited Speaker, Understanding Image Descriptions in the Wild. Invited Student Speaker, Data-driven Generation of Image Descriptions. NAACL Workshop on Vision and Language (WVL) 2013. Atlanta, GA GROUP Tianlu Wang, PhD Student Liyan Yang, Ph		Conference on Integrating Vision and Language Processing. Tartu, Estonia March 20	
Toyota Technological Institute at Chicago TTI-C Allen Institute for Artificial Intelligence AI2, Seattle, Washington California Institute of Technology (Caltech), Pasadena, California Carnegie Mellon University, The Robotics Institute VASC Seminar Series Disney Research Pittsburgh, The Walt Disney Company. Stanford University, Department of Computer Science, Vision Group. Seminar Speaker, Integrating Vision and Language. University of Virginia, Computer Science Dept. Charlottesville, Virginia Virginia Tech, Computer Science Dept., Blacksburg, Virginia Drexel University, Computer Science Dept. Philadelphia, Pennsylvania Invited Presentation, Learning High-level Judgments of Urban Perception. ECCV 2014 Workshop on Storytelling with Images and Videos. Zurich ECCV 2014 Workshop on Human-Machine Communication for Visual Recognition. Zurich Invited Speaker, Understanding Image Descriptions in the Wild. Invited Student Speaker, Data-driven Generation of Image Descriptions. NAACL Workshop on Vision and Language (WVL) 2013. Atlanta, GA GROUP Tianlu Wang, PhD Student — UVA Presidential Fellow 2019-2020 Fall 2016 - present Fuwen Tan, PhD Student Paola Cascante-Bonilla, PhD Student Aman Shrivastava, PhD Student Fall 2017 - present Fall 2017 - present Fall 2018 - present Fall 2019 - present		Universidad Técnica de Machala (UTM), Machala, Ecuador.	
Toyota Technological Institute at Chicago TTI-C Allen Institute for Artificial Intelligence AI2, Seattle, Washington California Institute of Technology (Caltech), Pasadena, California Carnegie Mellon University, The Robotics Institute VASC Seminar Series Disney Research Pittsburgh, The Walt Disney Company. Stanford University, Department of Computer Science, Vision Group. Seminar Speaker, Integrating Vision and Language. University of Virginia, Computer Science Dept. Charlottesville, Virginia Virginia Tech, Computer Science Dept., Blacksburg, Virginia Drexel University, Computer Science Dept. Philadelphia, Pennsylvania Invited Presentation, Learning High-level Judgments of Urban Perception. ECCV 2014 Workshop on Storytelling with Images and Videos. Zurich ECCV 2014 Workshop on Human-Machine Communication for Visual Recognition. Zurich Invited Speaker, Understanding Image Descriptions in the Wild. Invited Student Speaker, Data-driven Generation of Image Descriptions. NAACL Workshop on Vision and Language (WVL) 2013. Atlanta, GA GROUP Tianlu Wang, PhD Student — UVA Presidential Fellow 2019-2020 Fall 2016 - present Fuwen Tan, PhD Student Paola Cascante-Bonilla, PhD Student Aman Shrivastava, PhD Student Fall 2017 - present Fall 2017 - present Fall 2018 - present Fall 2019 - present		Invited Speaker, Language and Perceptual Categorization in Computer Vision.	
University of Virginia, Computer Science Dept. Charlottesville, Virginia Virginia Tech, Computer Science Dept., Blacksburg, Virginia Drexel University, Computer Science Dept. Philadelphia, Pennsylvania Invited Presentation, Learning High-level Judgments of Urban Perception. ECCV 2014 Workshop on Storytelling with Images and Videos. Zurich ECCV 2014 Workshop on Human-Machine Communication for Visual Recognition. Zurich Invited Speaker, Understanding Image Descriptions in the Wild. Invited Student Speaker, Data-driven Generation of Image Descriptions. Invited Student Speaker, Data-driven Generation of Image Descriptions. NAACL Workshop on Vision and Language (WVL) 2013. Atlanta, GA GROUP Tianlu Wang, PhD Student – UVA Presidential Fellow 2019-2020 Fall 2016 - present Fuwen Tan, PhD Student Fall 2017 - present Ziyan Yang, PhD Student Fall 2017 - present Paola Cascante-Bonilla, PhD Student Aman Shrivastava, PhD Student – first year rotation Fall 2020 - present Fuxiao Liu, MS Student Fall 2019 - present Katherine Weinschenk, Undergrad Student Fall 2020 - present		Toyota Technological Institute at Chicago TTI-C Allen Institute for Artificial Intelligence AI2, Seattle, Washington California Institute of Technology (Caltech), Pasadena, California Carnegie Mellon University, The Robotics Institute VASC Seminar Se Disney Research Pittsburgh, The Walt Disney Company.	April 2015 March 2015 March 2015 eries February 2015 January 2015
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Invited Speaker, Understanding Image Descriptions in the Wild. Yahoo! Labs, Sunnyvale, California. Invited Student Speaker, Data-driven Generation of Image Descriptions. NAACL Workshop on Vision and Language (WVL) 2013. Atlanta, GA GROUP Tianlu Wang, PhD Student – UVA Presidential Fellow 2019-2020 Fall 2016 - present Fuwen Tan, PhD Student Ziyan Yang, PhD Student Paola Cascante-Bonilla, PhD Student Aman Shrivastava, PhD Student Fuxiao Liu, MS Student Katherine Weinschenk, Undergrad Student Fall 2020 - present Fall 2020 - present Fall 2020 - present		ECCV 2014 Workshop on Storytelling with Images and Videos. Zurich	
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	GROUP	Fuwen Tan, PhD Student Ziyan Yang, PhD Student Paola Cascante-Bonilla, PhD Student Aman Shrivastava, PhD Student – first year rotation Fuxiao Liu, MS Student Katherine Weinschenk, Undergrad Student	Fall 2017 - present Fall 2017 - present Fall 2018 - present Fall 2020 - present Fall 2019 - present Fall 2020 - present

RESEARCH

	Lindsey Shavers, <i>Undergrad Student</i> Leticia Pinto-Alva <i>Visiting Student</i>	Fall 2018, Fall 2019 - present Fall 2019 - present	
RESEARCH GROUP ALUMNI	Shanmin Pang, Visiting Scholar – Asst. Prof. at Xi'an Jiaotong Xuwang Yin, Research Assistant (next PhD at UVA CpE prograf Fengyang Zhang, MS - Independent Studies (next at Facebook) Abhimanyu Banerjee, MS - Independent Studies (next at Cven Anudeep Konda, MS - Thesis (next at VoxelCloud) KS Sivaraman, MS - Independent Studies (next at Microsoft) Brandon Peck, Undergrad Student - (next at Microsoft) MengJia Luo, Undergrad Student - (next at Microsoft)	mm) Fall 2016 - Summer 2018 Spring 2018	
	Arun Kannan, Undergrad Capstone Project - (next at WICTOSOJI) Vijay Edupuganti, Undergrad Capstone Project (next at OpenE Shijia Wang, Undergrad Student - (next Georgia Tech MS) Nova Zhang, Undergrad Student Divya Bhaskhara, Undergrad Capstone Project - (next Johns He	Math) Fall 2017 - Spring 2018 Door Inc) Fall 2017 - Spring 2018 Summer 2017 - Fall 2017 Spring 2017	
	Jonathan Rodriguez, <i>CRA-DREU Visting Student – Tufts Und</i> Rosangel Garcia, <i>CRA-DREU Visting Student – Le Moyne Col</i> Ian K. Torres, <i>CRA-DREU Visting Student – UMass Amherst</i>		
TEACHING			
Experience	CS4501: Introduction to Computer Vision. University of Visionse website: Work in progress Course website: http://vicenteordonez.com/vision Course website: http://vicenteordonez.com/vision/2	Spring 2021 Fall 2019	
	CS6501: Vision and Language. University of Virginia. Course website: https://www.vicenteordonez.com/vis Course website: http://www.cs.virginia.edu/~vicent	slang/. Fall 2020	
	CS6501: Deep Learning for Visual Recognition. University Course website: http://vicenteordonez.com/deeplear Course website: http://vicenteordonez.com/deeplear	Spring 2020	
	CS6501: Computational Visual Recognition. University of V Course website: http://www.cs.virginia.edu/~vicent Course website: http://www.cs.virginia.edu/~vicent	e/recognition Fall 2017	
	Teaching Assistant.Foundations of Computer Science. Stony Brook University.2009-2010Object Oriented Programming. Escuela Superior Politécnica del Litoral, Ecuador.2005Introduction to Programming. Escuela Superior Politécnica del Litoral, Ecuador.2004Physics for Engineering. Escuela Superior Politécnica del Litoral, Ecuador.2004		
	I have also delivered guest lectures for the following courses: Big Data and Marketing Analytics. McIntire School of Commerce – UVA (Fall 2019) Introduction to Computer Vision. University of Virginia (Spring 2017) Language and Vision. University of North Carolina at Chapel Hill (Spring 2015) Computer Vision. University of North Carolina at Chapel Hill (Fall 2014) Artificial Intelligence. University of North Carolina at Chapel Hill (Spring 2014) Advanced Multimedia. Stony Brook University (Spring 2013) Computational Photography. Stony Brook University (Spring 2013)		

OTHER ACTIVITIES

Organizing Service.

Tutorials Chair / Member of Organizing Committee for the main conference:

• International Conference on Computer Vision (ICCV) 2021 – Montréal.

Member of Organizing Committee:

Video Turing Test (VTT): Toward Human-level Video Story Understanding Workshop.
 ECCV 2020. Glasgow, Scotland.

Tutorial on Bias and Fairness in Natural Language Processing, at the conference:

• Empirical Methods in Natural Language Processing (EMNLP) 2019 – Hong Kong.

Member of Organizing Team of Panel on Bias in Machine Learning at the

• ACM Richard Tapia Celebration of Diversity in Computing 2018.

BigVision Workshop on Large Scale Visual Recognition and Retrieval at the

• Conference on Computer Vision and Pattern Recognition (CVPR) 2016.

Co-Director with Commonwealth Professor Paul Humphreys (Dept. of Philosophy):

• University of Virginia's Human and Machine Intelligence Seminar 2017-Present.

University of Virginia's Computer Vision Seminar 2016 - Present (with my PhD students) Stony Brook University Computer Science Graduate Research Conference 2010

Area Chair / Program Committee / Meta-Reviewer.

Conf. on Computer Vision and Pattern Recognition (CVPR) 2020, 2021.

European Conference on Computer Vision (ECCV) 2020.

Annual Meeting of the Association for Computational Linguistics (ACL) 2020.

International Conference on Computer Vision (ICCV) 2019.

North American Chapter of the Association for Computational Linguistics (NAACL) 2019.

North American Chapter of the Association for Computational Linguistics (NAACL) 2018.

Workshop Program Committee / Reviewer.

NeurIPS Black in AI Workshop 2018, 2019, 2020

NAACL Workshop on New Forms of Generalization in Deep Learning 2018

ICCV Workshop on Closing the Loop Between Vision and Language 2015, 2017

ICCV Workshop on Web-scale Vision and Social Media 2015, 2017

NeurIPS Workshop on Efficient Methods for Deep Neural Networks 2016

ECCV Workshop on Web-scale Vision and Social Media 2016

EMNLP Workshop on Vision and Language 2015

ECCV Workshop on Storytelling with Images and Videos - VisStory 2014

ECCV Workshop on Human-Machine Communication for Visual Recognition 2014

Member of Expert Review Panel.

Swiss National Science Foundation (SNSF), 2020

US National Science Foundation (NSF), 2018, 2019

Flanders Research Foundation (FWO) - Belgium, 2017

Reviewer / Program Committee

Artificial Intelligence Journal (AIJ) 2021

Winter Conference on Applications of Computer Vision (WACV) 2021

AAAI Conference on Artificial Intelligence (AAAI-21)

IEEE Transactions on Pattern Analysis and Machine Intelligence (TPAMI) 2014 - 2021

Neural Information Processing Systems (NeurIPS) 2016, 2020

International Conference on Machine Learning (ICML) 2020 (as "Expert Reviewer").

Journal of Artificial Intelligence Research (JAIR) 2020.

Empirical Methods in Natural Language Processing (EMNLP) 2015, 2017, 2018, 2020

ACM Richard Tapia Celebration for Diversity in Computing – Panels and Workshops, 2019

Intl. Conference on Computer Vision and Pattern Recognition (CVPR) 2015 - 2019

European Conference on Computer Vision (ECCV) 2016, 2018

Association for Computational Linguistics (ACL) 2014, 2016 - 2018

International Conference on Computer Vision (ICCV) 2015, 2017

International Joint Conference in Artificial Intelligence (IJCAI) 2016 International Journal of Computer Vision (IJCV) 2014 - 2016

Asian Conference on Computer Vision (ACCV) 2016

Int'l Conference on Computer Graphics and Interactive Techniques (SIGGRAPH) 2016 North American Chapter of the Association for Computational Linguistics (NAACL) 2016 IEEE Transactions on Multimedia (TM) 2013, 2016.

Elsevier Computer Vision and Image Understanding (CVIU) 2014, 2015

Elsevier Information Processing Letters (IPL) 2014

IEEE Transactions on Neural Networks and Learning Systems (TNNLS) 2014

IEEE Transactions on Image Processing (TIP) 2013.

ACM Multimedia (MM) 2010. International Multimedia Conference.