Ab Ellis Mosca
(they\them\theirs)

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EDUCATION

Tufts University   Medford, MA
Ph.D. in Computer Science, Advisor: Remco Chang   Expected August 2021
Honors:

>   2021 School of Engineering Outstanding Graduate Contributor to Engineering Education Award

Tufts University   Medford, MA
M.S. in Computer Science, Advisor: Remco Chang   May 2019

Smith College   Northampton, MA
B.A. in Mathematics, *magna cum laude*   May 2014
Honors:

>   Phi Beta Kappa, 2013

>   Pokora Senior Scholar Athlete, 2014 (recognizes senior scholar athlete with the highest GPA)

PUBLICATIONS

[1] **A. Mosca**, A. Ottley and R. Chang. Does Interaction Improve Bayesian Reasoning with Visualization?. *ACM CHI Conference on Human Factors in Computing Systems*, Yokohama, Japan, 2021.

[2] M. Procopio, **A. Mosca**, C. Scheidegger, E. Wu and R. Chang. Impact of Cognitive Biases on Progressive Visualization. *IEEE Transactions on Visualization and Computer Graphics*, 2021.

[3] **A. Mosca**, S. Robinson, M. Clarke, R. Redelmeier, S. Coates, D. Cashman, and R. Chang. Defining an Analysis: A Study of Client-Facing Data Scientists. *EuroVis 2019 - Short Papers*, 2019.

[4] D. Cashman, S. Rukh Humayoun, F. Heimerl, K. Park, S. Das, J.R. Thompson, B. Saket, **A. Mosca**, J. Stasko, A. Endert, M. Gleicher, and R. Chang. A User-based Visual Analytics Workflow for Exploratory Model Analysis. *Computer Graphics Forum*, 2019.

[5] G. Ryan, **A. Mosca**, R. Chang, and E. Wu. At a Glance: Pixel Approximate Entropy as a Measure of Line Chart Complexity. *IEEE Transactions on Visualization and Computer Graphics*, 2018.

[6] D. Cashman, G. Patterson, **A. Mosca**, N. Watts, S. Robinson, R. Chang. RNNbow: Visualizing Learning via Backpropagation Gradients in RNNs. *IEEE Computer Graphics and Applications*, 2018.

[7] Lester, R.S., Irvin, C.V., **Mosca, A.** & Bradnan, C. (2015). *Tipping the Balance: The Balancing Incentive Program and State Progress on Rebalancing Their Long-Term Services and Supports.* Medicaid.gov.

[8] **Mosca, A.** & Teitelbaum, N.D. (2015). Pancreas. In Brehm, B.A. (ed.), *Nutrition: Science, Issues, and Applications.* Santa Barbara, CA: Greenwood Press.

[9] **Mosca, A.** (2015). Microbiota and Microbiome. In Brehm, B.A. (ed.), *Nutrition: Science, Issues, and Applications.* Santa Barbara, CA: Greenwood Press.

[10] **Mosca, A.** (2015). Polyphenols. In Brehm, B.A. (ed.), *Nutrition: Science, Issues, and Applications.* Santa Barbara, CA: Greenwood Press.

Papers in Submission \Preparation

[11] A. Suh, **A. Mosca**, D. Cashman, Q. Pham, S. Robinson, A. Ottley, and R. Chang. Inferential Tasks as an Evaluation Technique for Visualization. (In submission, VIS, 2021)

[12] N. Lopatina, **A. Mosca**, and A. Brennen. How Good is your Machine Translation? Design and Evaluation of a Quality Estimation System. (In submission, ACL Demo Papers, 2021)

Workshops

A. Mosca, A. Ottley, and R. Chang. Does Interaction Improve Bayesian Reasoning with Visualization? In *IEEE Visualization Workshop on Visualization for Communication (VisComm)*, 2020.

D. Cashman, G. Patterson, **A. Mosca**, and R. Chang. RNNbow: Visualizing the Learning Process in Recurrent Neural Networks. In *IEEE Visualization Workshop on Visual Analytics for Deep Learning (VADL)*, 2017. **Best Paper Award**.

Posters

A. Mosca, Shannon Robinson, Meredith Clarke, Rebecca Redelmeier, Sebastian Coates, Dylan Cashman, and Remco Chang. Towards Data Science for the Masses: A Study of Data Scientists and Their Interactions with Clients. Poster, *IEEE Conference on Information Visualization (InfoVis)*, 2018.

Gabriel Ryan, **A. Mosca**, Remco Chang, and Eugene Wu. Approximate Entropy as a Measure of Line Chart Complexity. Poster, *IEEE Conference on Information Visualization (InfoVis)*, 2017.

Teaching

Co-instructor at Tufts University   Fall 2020
Visualization Seminar (COMP 250)

Co-instructor at Tufts University   Spring 2020
Directed Study in Visual Analytics (COMP 194)

Guest Lecture at Tufts University   Fall 2019
Visual Analytics (COMP 150)

Instructor at Northeastern University   Summer 2019
Pre-Align Math Introduction Course

Teaching Assistant at Tufts University   Spring 2019
Computer Graphics (COMP 175)

Undergraduate Research Coordinator at Tufts University   Summer 2017
Visual Analytics Lab at Tufts (VALT)

Head Teaching Assistant at Tufts University   Fall 2016 - Spring 2017
Discrete Mathematics (COMP 61)

Undergraduate Teaching Assistant at Smith College   Spring 2014
Modeling in the Sciences (MTH 205)

Quantitative Tutor at Smith College   Fall 2013 - Spring 2014
Spinelli Center for Quantitative Learning

Peer Tutor at Smith College   Spring 2012 - Spring 2014
Mathematics (MTH 111, 112, 153, 211, 212)

Mentoring

Alice Dempsey Tufts 2021   Fall 2020 –Present
VALT Undergraduate Researcher

Andrew Wang Tufts 2021   Fall 2020 –Present
VALT Undergraduate Researcher

Helen Li Tufts 2023   Fall 2020 –Present
VALT Undergraduate Researcher

Kate Hanson Tufts 2021   Fall 2019 –Present
VALT Undergraduate Researcher

Tania Valrani Tufts 2021   Spring 2020
Master's Student Directed Study

Sammy Stolzenbach Tufts 2020   Summer 2019 –Spring 2020
VALT Undergraduate Researcher
Currently: Data Analyst at New York Times

Sebastian Coates Tufts 2020   Fall 2017 –Spring 2018
VALT Undergraduate Researcher
Currently: Co-founder at Immuto

Meredith Clarke Tufts 2019   Summer 2017 –Spring 2018
VALT Undergraduate Researcher
Currently: Analyst at Education Resource Strategies

Rebecca Redelmeier Tufts 2019   Summer 2017 –Spring 2018
VALT Undergraduate Researcher
Currently: Audience Engagement Associate at Committee to Protect Journalists

Julia Romero University of Texas at Austin 2020   Summer 2017
REU Student
Currently: PhD Student in Computer Science at University of Colorado at Boulder

Reviewing Activities

ACM CHI Conference on Human Factors in Computing Systems (CHI)
2021

International Journal of Human - Computer Studies (IJHCS)
2020

IEEE Transactions on Visualization and Computer Graphics (TVCG)
2020

IEEE Conference on Information Visualization (InfoVis)
2019, 2020

IEEE Conference on Visual Analytics Science and Technology (VAST)
2019, 2020

Eurographics and IEEE Visualization and Graphics Technical Committee Conference on Visualization (EuroVis)
2019

Workshop Organization

IEEE VIS Machine Learning from User Interactions for Visualization and Analytics (MLUI)
2020, 2021 Organizer

TRIPODS - HDR Workshop
2020 Organizer

Experience

IQT Labs Waltham, MA
Visualization Group Intern June 2020 - August 2020

National Renewable Energy Lab Golden, CO
Insight Center Intern June 2018 – August 2018

Mathematica Policy Research Cambridge, MA
Data Associate June 2014 – July 2016

Research Experience for Undergraduates, SUNY Potsdam Potsdam, NY
Student Researcher June 2013 – August 2013

Professional Memberships

Association for Computing Machinery (ACM)
2016 - 2020

IEEE Computer Society
2016 - 2020

American Statistical Association (ASA)
2020

Leadership Positions

President Spring 2017 – Spring 2019
Tufts ACM-W Student Chapter

Member Spring 2018 – Spring 2019
Tufts Computer Science Student Council

First Year and Master's Representative Spring 2017 – Spring 2018
Tufts Graduate Computer Science Student Council

Captain Spring 2013 – Spring 2014
Smith College Track & Field

Captain Fall 2012 – Fall 2013
Smith College Cross Country