Tyler Giallanza
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Education

2020-Present	Ph.D., Psychology and Neuroscience Princeton University Advisor: Jonathan Cohen, Ph.D., M.D.
2019-2020	Study Abroad, Computer Science University of Oxford
2017-2020	B.S., Computer Science Southern Methodist University

Research Positions

2019-2020	NSF-Funded Research Assistant Neuroscience of Cognitive Control Lab, Princeton University Advisor: Jonathan Cohen, Ph.D., M.D.
2017-2019	Undergraduate Research Assistant Darwin Deason Institute for Cybersecurity, Southern Methodist University Advisors: Eric Larson, Ph.D., and Mitchell Thornton, Ph.D.
2017-2019	Undergraduate Research Assistant Intelligent Data Analysis Laboratory, Southern Methodist University Advisor: Michael Hahsler, Ph.D.

Fellowships, Awards, and Honors

2020	E. H. Flath Award (valedictorian equivalent), *Lyle School of Engineering, Southern Methodist University*
2019	Goldwater Scholar, *Barry Goldwater Scholarship Foundation*
2019	Research Experience for Undergraduates (REU) Recipient, *National Science Foundation*
2019	Leadership Alliance Scholar, *Leadership Alliance*
2017-2020	President's Scholar (full academic scholarship), *Southern Methodist University*
2017-2020	National Merit Scholar, *National Merit Scholarship Corporation*
2017	AXA Achievement Scholar, *AXA*
2017	2nd Place National Champion, *CyberPatriot Cybersecurity Competition*
2017	National AP Scholar, *The College Board*

Peer-Reviewed Publications

1. **Giallanza T**, Siems T, Gabrielsen E, Johnson I, Larson E, Thornton M (2019). Keyboard Snooping from Mobile Phone Arrays with Mixed Convolutionaland Recurrent Neural Networks. *Proceedings of the ACM on Interactive, Mobile, Wearable, and Ubiquitous Technologies.* 3(2), 45.
2. **Giallanza T**, Gabrielsen E, Taylor M, Larson E, Thornton M (2019). Task Value Calculus: Multi-objective Trade off Analysis using Multiple-Valued Decision Diagrams. Proceedings of the *2019 IEEE 49th International Symposium on Multiple-Valued Logic*. 126-131.

Open-Source Code Packages

1. **Giallanza T,** Hahsler M (2020). ArulesCWAR: Classification Based on Weighted Association Rules. *The Comprehensive R Archive Network (CRAN).*
2. Hahsler M, **Giallanza T,** Chelluboina S (2019). ArulesViz: Visualizing Association Rules and Frequent Itemsets. *The Comprehensive R Archive Network (CRAN).*
3. Johnson I, **Giallanza T,** Hahsler M (2019). ArulesCBA: Classification Based on Association Rules in R. *The Comprehensive R Archive Network (CRAN).*

Manuscripts Under Review or in Revision

1. Henselman-Petrusek G, **Giallanza T**, Musslick S, Cohen JD (2020). Multitasking Networks use Multiaffine Representations to Direct Flow of Feature Data.
2. Iordan MC, **Giallanza T,** Ellis CT, Beckage N, Cohen JD (2020). Context Matters: Recovering Human Semantic Structure from Machine Learning Analysis of Large-Scale Text Corpora. Preprint: https://arxiv.org/abs/1910.06954

Invited Talks

2019	Context-Specific Embedding Spaces Recover Similarity *Princeton Neuroscience Institute and Intel Labs, Princeton NJ*
2019	Firebase as a Mobile and Web Backend *HackSMU 2019, Southern Methodist University, Dallas TX*
2017	Scheduling Algorithms for Course-Conflict Reduction at Large Schools *Board of Directors Meeting, Cherry Creek School District, Denver CO*

Conference Presentations

Talks

1. **Giallanza T**, Iordan MI, Ellis CT, Beckage N, Cohen JD (2019). Context Matters: Recovering Human Semantic Structure from Machine Learning Analysis of Large-Scale Text Corpora.
   Society for Neuroscience Annual Conference, Chicago, IL.
2. **Giallanza T**, Siems T, Gabrielsen E, Johnson I, Thornton M, Larson E (2019). Keyboard Snooping from Mobile Phone Arrays with Mixed Convolutional and Recurrent Neural Networks.
   ACM International Joint Conference on Pervasive and Ubiquitous Computing (UbiComp), London, United Kingdom.
3. **Giallanza T**, Gabrielsen E, Taylor M, Larson E, Thornton M (2019). Task Value Calculus: Multi-objective Trade off Analysis using Multiple-Valued Decision Diagrams.
   IEEE International Symposium on Multiple-Valued Logic, Fredericton, Canada.

Posters

1. Henselman-Petrusek G, **Giallanza T**, Musslick S, Cohen JD (2020). Multitasking Networks use Multiaffine Representations to Direct Flow of Feature Data.
   DeepMath 2020, Virtual.
2. **Giallanza T**, Iordan MI, Ellis CT, Beckage N, Cohen JD (2019). Context Matters: Recovering Human Semantic Structure from Machine Learning Analysis of Large-Scale Text Corpora.
   Council on Undergraduate Research, Washington DC, USA.
3. **Giallanza T**, Iordan MI, Cohen JD (2019). Context-Specific Embedding Spaces Recover Similarity.
   Leadership Alliance national Symposium, Hartford CT, USA.

Teaching

Spring 2019	Computer Security (Course Instructor: Michael Lefebre) Southern Methodist University, Dallas, TX *Guest Lecturer*: Produced and provided lecture on time-delay based methods for authentication of messages over a TCP/IP link.
August 2018 – Present	CyberPatriot Cybersecurity Competition Virtual, USA *Team Mentor*: Provide mentoring and instruction to teams of high-school students competing in the competition. Mentored a total of 8 teams.
Summer 2016 – Winter 2018	Colorado Mathematics and Computer Science Camp Denver, CO *Creator/Head Instructor*: Co-created the largest mathematics and computer science camp in the Denver Tech Center area, serving over 60 middle-school and high-school students total. Created the curriculum, delivered lectures, and interacted with students.

Mentoring

High School Students

2020-2021	Viraaj Reddi, Saratoga High School Smartphone-based Severity Diagnosis of Keratoconus
2020-2021	Devon Krish, Los Gatos High School Emotion Classification from EEG Data during Music Listening