









Austin P. Wright

Civic AI + Social Computing researcher

I'm a Ph.D. student in the College of Computing at Georgia Tech advised by Polo Chau.

My research in **Civic AI** aims to solve problems intersecting machine learning, human-computer interaction, and public policy, by using a strong principled basis in both mathematical and human centered principles to actualize the potential of new technologies for **social good** with *usability, interpretability, and fairness*.

 austinpwright.com
 apwright@gatech.edu
 CV PDF

 [@austin_p_wright](https://twitter.com/austin_p_wright)
 github.com/APWright
 Google Scholar

Education

- Fall 2019 — **Ph.D. in Machine Learning**
Present Georgia Institute of Technology
Advisor: Duen Horng (Polo) Chau
- Fall 2018 — **Msc. in Computing with Specialism in Machine Learning**
Fall 2019 Imperial College London
Thesis: Comparison of Syntactic and Semantic Representations of Programs in Neural Embeddings
Degree Class: Merit
- Fall 2014 — **B.A. in Physics and Computer Science**
Spring 2018 University of California, Berkeley
Overall GPA: 3.63 Physics GPA: 3.59 CS GPA: 3.87

Research Experience

- Summer 2020 **NASA Jet Propulsion Laboratory**, Remote
Intern, Data Visualization
Mentor: Scott Davidoff
Joint work between NASA JPL, Caltech, and Art Center creating interactive data visualizations for current scientific research.
Prototype presented to lab leadership and spurring ongoing follow on work at JPL.
- Fall 2019 — **Centers for Disease Control and Prevention**, Chamblee, GA
Present *ORISE Fellow, National Center for Injury Prevention and Control*
Mentor: Steve Sumner
Introduced natural language processing and data visualization tools for detecting emerging trends in the opioid epidemic.

- Fall 2019 — **Georgia Institute of Technology**, Atlanta, GA
 Present *Graduate Research Assistant, School of Computational Science and Engineering*
 Advisor: Duen Horng (Polo) Chau
 Member of the Polo Club of Data Science where we bridge and innovate at the intersection of data mining and human-computer interaction to synthesize scalable, interactive, and interpretable tools that amplify human's ability to understand and interact with big data.
- Summer 2018 **Los Alamos National Laboratory**, Los Alamos, NM
Graduate Researcher, Dr. G. Robert Keepin Nonproliferation Summer School
 Mentor: Karen Miller
 Designed and built machine learning data analysis models and visualization dashboards for facility characterization, and spent fuel measurement using disparate stream data fusion.
- Winter 2017 — **Nuclear Science and Security Consortium**, Berkeley, CA
 Spring 2018 *Undergraduate Affiliate, Complex Systems Group*
 Mentor: Bethany Goldblum
 Developed multiplex network modeling for nuclear nonproliferation and multisensor security systems, with a focus on machine learning in particular deep recurrent neural networks.
- Summer 2017 **CITRIS and the Banatao Institute**, Berkeley, CA
Undergraduate Research Assistant, Phoebe A. Hearst Museum of Anthropology
 Mentor: Chris Hoffman
 Lead creation of novel photogrammetry pipeline for Phoebe A Hearst Museum of Anthropology in collaboration with the CITRIS Pacific Research Platform.

Honors and Awards

- 2020 IEEE VIS 2020 Best Poster Research Honorable Mention
 For poster: Mapping Researchers with PeopleMap
- 2020 GT-GSU Public Interest Technology (PIT) Fellow
 The Southeast Region PIT Fellows program supports collaborations between technologists and social scientists centered around the historic and continued equity challenges of the Southeast region and provide a model for regional PIT work focused on community challenges.
- 2019, 2020 Oak Ridge Institute of Science Education Fellowship
 Research Program at the Centers for Disease Control and Prevention (CDC), managed by the Oak Ridge Institute for Science and Education (ORISE) under an agreement between the CDC and the U.S. Department of Energy (DOE).
- 2019, 2020 Georgia Tech President's Fellowship
 For "exemplary levels of scholarship and innovation"
- 2017 U.S. Department of Energy Network Science and Nuclear Nonproliferation Challenge 1st Prize
 For novel deep recurrent neural network architectures to infer facility operations.
- 2016 Pioneers in Engineering Outstanding Mentor Award
 For dedication to my students and enthusiasm in teaching

Publications

RECAST: Enabling User Recourse and Interpretability of Toxicity Detection Models with Interactive Visualization

Austin P. Wright, Omar Shaikh, Haekyu Park, Will Epperson, Muhammed Ahmed, Stephane Pinel, Diyi Yang, Duen Horng (Polo) Chau

24th ACM Conference on Computer-Supported Cooperative Work & Social Computing. 2021.

[Project](#) [PDF](#)

A Comparative Analysis of Industry Human-AI Interaction Guidelines

Austin P. Wright, Zijie J. Wang, Haekyu Park, Grace Guo, Fabian Sperrle, Mennatallah El-Assady, Alex Endert, Daniel Keim, Duen Horng Chau

IEEE VIS, Workshop on TRust and EXpertise in Visual Analytics. 2020.

[Project](#) [PDF](#) [BibTeX](#)

Mapping Researchers with PeopleMap

Jon Saad-Falcon, Omar Shaikh, Zijie J. Wang, Austin P. Wright, Sasha Richardson, Duen Horng (Polo) Chau

IEEE Visualization 2020. 2020.

[PDF](#) [BibTeX](#) 🏆 **Honorable Mention Best Poster Research**

RECAST: Interactive Auditing of Automatic Toxicity Detection Models

Austin P. Wright, Omar Shaikh, Haekyu Park, Will Epperson, Muhammed Ahmed, Stephane Pinel, Diyi Yang, Duen Horng (Polo) Chau

The eighth International Workshop of Chinese CHI. 2020.

[Project](#) [PDF](#) [BibTeX](#)

The nuclear network: multiplex network analysis for interconnected systems

Bethany L. Goldblum, Andrew W. Reddie, Thomas C. Hickey, James E. Bevins, Sarah Laderman, Nathaniel Mahowald, Austin P. Wright, Elie Katzenson, Yara Mubarak

Applied Network Science volume 4, Article number: 36 (2019). 2019.

[Project](#) [PDF](#) [BibTeX](#)

Smart Monitoring of Nuclear Facilities: Implementation Concepts and Development Status

Paul Michael Mendoza, Karen Ann Miller, Emily Michele Casleton, Janette Rose Frigo, Rosalyn Cherie Rael, Kendra Lu Van Buren, Jonathan Lee Woodring, Vlad Henzl, Austin P. Wright

LA-UR-19-26663. 2019.

[PDF](#) [BibTeX](#)

Disparate Data Integration for Advanced Facility Monitoring

Karen Ann Miller, Kendra Lu Van Buren, Janette Rose Frigo, Max Zeyen, Joshua P. Sackos, Paul Michael Mendoza, Austin P. Wright

IAEA Symposium on International Safeguards. 2018.

[Project](#) [PDF](#) [BibTeX](#)

Press

2020 "Making Crime Data More Accessible and User Friendly", Georgia Tech College of Computing

Talks

A Comparative Analysis of Industry Human-AI Interaction Guidelines

2020 IEEE Vis Workshop on TRust and EXpertise in Visual Analytics

[Video](#)

MORGANA - a flight rules authoring, validating, and evaluation tool

2020 JPL Data Visualization Internship Program, Final Presentation, Virtual

[Video](#)

RECAST: Interactive Auditing of Automatic Toxicity Detection Models

2020 The eighth International Workshop of Chinese CHI, Virtual

Canary Project Review

2018 Department of Energy (DOE) National Nuclear Security Administration (NNSA) Defense Nuclear Nonproliferation Research and Development (DNN R&D) University Program Review (UPR)., Ann Arbor, Michigan

Canaries in a Nuclear Mine: Complexity Science for Nuclear Security

2017 Institute for Nuclear Materials Management, Sandia National Laboratories, Albuquerque, New Mexico

Mentoring

Fall 2019 — **Omar Shaikh**
Present *B.S. in Computer Science, Georgia Institute of Technology*
Natural Language Processing and Social Computing
🏆 Sigma Xi Best Undergraduate Research Award

Spring 2020 — **Jon Saad-Falcon**
Present *B.S./M.S. in Computer Science, Georgia Institute of Technology*
Data Visualization
🏆 Honorable Mention Best Poster Research

References

Dr. Polo Chau, Associate Professor
School of Computational Science and Engineering
Georgia Institute of Technology
Atlanta, GA, USA
cc.gatech.edu/~dchau/

Dr. Steven A. Summner, Senior Advisor for Data Science and Innovation
National Center for Injury Prevention and Control
Centers for Disease Control and Prevention
Atlanta, GA, USA
www.cdc.gov/injury/pressroom/fullbios_subjectmatterexperts/bio_StevenSumner

Dr. Scott Davidoff, Human-Computer Interaction Researcher
Human Interfaces Group
NASA Jet Propulsion Lab
Pasadena, CA, USA
scottdavidoff.com

Dr. Scott Jacques, Associate Professor
Department of Criminal Justice & Criminology
Georgia State University
Atlanta, GA, USA
aysps.gsu.edu/profile/scott-jacques/

Contact

Austin P. Wright apwright@gatech.edu
Coda Tech Square Georgia Tech
756 W Peachtree St NW Atlanta, GA 30308