Zachary R. Tidler

Curriculum Vitae

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Georgia Institute of Technology
School of Psychology
Atlanta, GA 30332-0170

EDUCATION

PhD Georgia Institute of Technology, Psychology — August 2024 (Expected)
Major: Engineering Psychology
Minors: Quantitative Methods; Human-Computer Interaction

MS Georgia Institute of Technology, Psychology — May 2021
Major: Engineering Psychology
Individual Differences in Deepfake Detection: Mindblindness and Political Orientation

BA Florida Gulf Coast University, Psychology — December 2014
Cum Laude

RESEARCH EXPERIENCE

Georgia Institute of Technology, Atlanta, GA — 2018 to Present
Graduate Student/Lab Manager, Problem-Solving and Educational Technology Lab

Emory University, Atlanta, GA — May 2022 to August 2022
Human Factors Research – Summer Intern, Healthcare Human Factors Laboratory

Johns Hopkins All Children's Hospital, St. Petersburg, FL — 2017 to 2018
Volunteer Research Assistant, Rothman Center for Neuropsychiatry

INDUSTRIAL EXPERIENCE

GoFactr, Atlanta, GA — 2020 to 2022
User-Experience Designer

Yasny, LLC, Tampa, FL — 2016 to 2018
Founder and Lead User-Experience Designer

Tennis Teaching Professional

- Brandon Sports and Aquatic Center, Valrico, FL — 2007 to 2010; 2016 to 2018
- Camp White Pine, Haliburton, Ontario, CA — 2014 to 2016
- The Club at Grandezza, Estero, FL — 2010 to 2014

TEACHING EXPERIENCE

As Instructor of Record, School of Psychology — August 2020 to Present
Georgia Institute of Technology, Atlanta, GA

- **PSYC 2270 - Engineering Psychology**

    - One Section
        - Summer, 2023
            - Enrollment ~ 15 students (Study Abroad, Scotland)
- **PSYC 2020 – Psychological Statistics**
    - Two Sections
        - Summer, 2023
            - Enrollment ~30 students (Study Abroad, Scotland with a Hybrid Component for Stateside Students)
            - I also taught the associated lab section
        - Summer, 2022
            - Enrollment ~ 20 Students
            - Supervised 1 lab instructor and 1 teaching assistant
- **PSYC 2015 – Research Methods in Psychology**
    - Two Sections
        - Spring, 2024 (Scheduled)
            - Supervising 1 lab instructor and 1 teaching assistant
            - Anticipated enrollment ~ 50
        - Fall, 2022
            - Supervised 3 lab instructors and 1 teaching assistant
            - Enrollment ~ 120
- **PSYC 1101 – General Psychology**
    - Four Sections
        - Fall, 2023
            - Enrollment ~ 120
            - Supervised 1 teaching assistant
        - Spring, 2022
            - Enrollment ~ 120
            - Supervised 2 teaching assistants
        - Fall, 2021
            - Enrollment ~ 120 (Hybrid)
            - Supervised 3 teaching assistants
        - Fall, 2020
            - Enrollment ~ 120 (Entirely Online)
            - Supervised 3 teaching assistants

As Lab Instructor, School of Psychology May 2019 to May 2020
Georgia Institute of Technology, Atlanta, GA

- **PSYC 2020L – Psychological Statistics – Laboratory**
    - One section
        - Summer, 2023 (I was also the instructor of record for the lecture section)

- **PSYC 2015L – Research Methods in Psychology Laboratory**
    - Four sections
        - Summer, 2021 (Entirely Online)
        - Spring, 2020 (Partially Online)
        - Fall, 2019
        - Summer, 2019

As Graduate Teaching Assistant, School of Psychology August 2018 to May 2019
Georgia Institute of Technology, Atlanta, GA

- **PSYC 1101 – General Psychology**
  - Two Sections
    - Fall, 2018
    - Spring, 2019

- **PSYC 2270 – Engineering Psychology**
  - One Section
    - Summer, 2020

INDUSTRY-RELATED AWARDS

As Founder of Yasny, LLC

- Winner of the 2016 *Building Entrepreneurship Around Tampa Bay Business Plan Competition*
- Finalist in the *1776 Challenge Cup Tampa Business Competition*
- Resident Member of the Tampa Bay Technology Incubator

FELLOWSHIPS

Graduate Assistance in Areas of National Need Fellowship (GAANN) 2023-2024
U.S. Department of Education

RESEARCH GRANTS

APS Fund for Teaching and Public Understanding of Psychological Science: Small Grants
Title: *AI-Powered Assessments of Conceptual Understanding*
Position: Principal Investigator
Budget: $5,000 (UNDER REVIEW)

HFES Seed Grants Targeting the Intersections of HF/E and Anti-Racism/Anti-Bias
Title: *Effects of Race and Sex on Deepfake Detection Performance*
Position: Principal Investigator
Project dates: September 2022 - Ongoing
Budget: $5,000 (AWARDED)

GVU Center and Institute for People and Technology (IPaT) Seed Grant
Title: A User-Centered Investigation of Deepfake-Detection Aid Design
Position: Principal Investigator
Project dates: August 2022 - Ongoing
Budget: $25,000 (AWARDED)

Georgia Tech Psychology Interlab Grant
Title: Brutes and Hackers: Individual Differences in Problem-Solving Strategies
Position: Co-Principal Investigator
Project dates: August 2021 – May 2023

Budget: $1,500 (AWARDED)

Georgia Tech Psychology Interlab Grant
Title: Factors Moderating the Mitigation of Dysrationalia During an Undergraduate Education
Position: Co-Principal Investigator
Project dates: April 2019 - February 2021
Budget: $2,000 (AWARDED)

ONGOING RESEARCH PROJECTS

Effects of Cognitive Load on Deepfake Detection Performance	2023-Present
Facilitating the "Protégé Effect" with a Large-Language-Model Learner	2023-Present
Effects of Race and Sex on Deepfake Detection Performance	2022-Present
Brutes and Hackers: Individual Differences in Problem-Solving Approaches	2021-Present

PUBLICATIONS

Journal Publications

Tatel, C. E., **Tidler, Z. R.** & Ackerman, P. L. (2022). Process differences as a function of test modifications: Construct validity of Raven's advanced progressive matrices under standard, abbreviated and/or speeded conditions – A meta-analysis. *Intelligence*, 90, 101604. (*EQUAL 1st AND 2nd AUTHOR CONTRIBUTIONS*)

Journal Manuscripts (In Preparation or Under Review)

Tidler, Z. R., & Catrambone, R. (In Prep) Individual Differences in Deepfake Detection: Mindblindness and Political Orientation.

Catrambone, R., **Tidler, Z. R.,** Sheiter, K., & Gerjets, P. (In Prep) Problem Solving Transfer is Aided When Learners Study Examples Emphasizing Modular Components Rather than Problem Categories

Ackerman, P. L., Fulkerson, Haden., Lyndgaard, S., Tatel, C. E., **Tidler, Z.R.** (In Prep) Technological Fluency and Individual Differences in Just-in-Time Learning (*AUTHOR ORDER STILL BEING DETERMINED*)

Conference Proceedings Papers (Refereed)

Tidler, Z.R., & Catrambone, R. (Accepted) Effects of Neurodivergence on Deepfake-Video Detection: Autism Spectrum Disorder. In *Proceedings of the 13th International Symposium on Human Factors and Ergonomics in Health Care*

Tidler, Z.R., & Catrambone, R. (Accepted) Effects of Neurodivergence on Deepfake-Video Detection: Mild Cognitive Impairment. In *Proceedings of the 13th International Symposium on Human Factors and Ergonomics in Health Care*

Parker, M. C., Davidson, M. J., Kao, Y. S., Margulieux, L. E., **Tidler, Z. R**., & Vahrenhold, J., (In-Press). Toward CS1 Content Subscales: A Mixed-Methods Analysis of an Introductory Computing Assessment. In *Proceedings of the 23rd International Conference on Computing Education Research.*

Tidler, Z. R., Tatel, C. E., & Ackerman, P. L. (2022). The Internet and Manuals: A Use-Oriented Study of Just-in-Time Acquisition of Novel Procedural Knowledge. In Proceedings of the 66th International Annual Meeting of the Human Factors and Ergonomics Society.

Lyndgaard, S., **Tidler, Z. R**., Provine, L., & Varma, S. (2022). Catastrophic interference in neural network models is mitigated when the training data reflect a power-law environmental structure. In *Proceedings of the Annual Meeting of the Cognitive Science Society* (Vol. 44, No. 44). (*EQUAL 1st AND 2nd AUTHOR CONTRIBUTIONS*)

Harrison, J. L., & **Tidler, Z. R.** (2020). A Cost-Effective and User-Centered Approach to Adapting the EpiPen Auto-Injector for Safer Use. In *Proceedings of the International Symposium on Human Factors and Ergonomics in Health Care* (Vol. 9, No. 1, pp. 173-174). SAGE Publications: Los Angeles, CA

Conference Manuscripts (In Preparation or Under Review)

Tidler, Z. R., & Catrambone, R. (In Prep) Individual Differences in Deepfake Detection: Intelligence and Non-Intellective Traits.

Tidler, Z.R. (In Prep) A Signal Detection Theoretic Investigation of Deepfake Detection as a Function of Video Length.

CONFERENCE PRESENTATIONS

Tidler, Z. R., Gleaton, E., & Stern, E. (2023). Trait Correlates of Attitudes Toward Adoption of Male Contraception. Poster presented at the International Symposium on Human Factors and Ergonomics in Health Care. Orlando.

Tidler, Z. R., Tatel, C. E., & Ackerman, P. L. (2022). The Internet and Manuals: A Use-Oriented Study of Just-in-Time Acquisition of Novel Procedural Knowledge. Lecture given at the 66th International Annual Meeting of the Human Factors and Ergonomics Society.

Tidler, Z. R., Gleaton, E., Levy, E., & Stern, E. (2022). Trait Correlates of Attitudes Toward Adoption of Male Contraception. Poster presented at the 2022 Georgia Tech School of Psychology Annual Graduate Student Conference. (Winner of "Best Poster" Award)

Tatel, C, E., **Tidler, Z. R.,** Kim, K., & Spingler, N. (2022). Brutes and Hackers: Individual Differences in Preferences for Problem-Solving Strategy. Poster presented at the 2022 Association for Psychological Science Annual Convention. Chicago.

Malik, S., **Tidler, Z. R.,** Rogers, E. P., & Lloyd, M. (2022). Incentivizing Performance on Cognitive Ability Tests. Poster presented at the 2022 Association for Psychological Science Annual Convention. Chicago.

Tidler, Z. R., Gleaton, E., Levy, E., & Stern, E. (2022). Trait Correlates of Attitudes Toward Adoption of Male Contraception. Poster presented at the 2022 Association for Psychological Science Annual Convention. Chicago.

Tidler, Z. R., Pereira, T., Lumacad, G., & Catrambone, R. (2022). Assessing Deepfake Video Detection Ability Using Unsupervised Machine Learning. Poster presented at the Annual Meeting of the Cognitive Science Society.

Harrison, J. L., **Tidler, Z. R**., Dunbar, T., Grimm, D. & Zhou, S. (2022) A Quantitative Study on Alert Fatigue in a Novel Experimental Design. Poster presented at the International Symposium on Human Factors and Ergonomics in Health Care. New Orleans.

Tidler, Z. R., Pai, N., Snoll, A., Helmy, A., & Catrambone, R. (2021). The Wikipedia Game: A Better Measure of Crystallized Intelligence? Poster presented at the Annual Meeting of the Psychonomic Society. Virtual.

Tidler, Z. R., & Catrambone, R. (2021). Individual Differences in Deepfake Detection: Mindblindness and Political Orientation. Poster presented at the Annual Meeting of the Cognitive Science Society. Virtual.

Harrison, J. L., & **Tidler, Z. R.** (2020). A Cost-Effective and User-Centered Approach to Adapting the EpiPen Auto-Injector for Safer Use. Poster presented at the International Symposium on Human Factors and Ergonomics in Health Care. Virtual.

COLLOQUIA AND INVITED TALKS

Tidler, Z. R., Catrambone, R., & Stasko, J.T., (March, 2023). *Thinking Deeply about Deepfake Videos.* Presentation to the GVU Center Colloquium, Georgia Institute of Technology, Atlanta, GA.

Tidler, Z. R., (February, 2023). *Thinking Deeply about Deepfake Videos.* Think Tank Session Facilitated for the Institute for People and Technology, Georgia Institute of Technology, Atlanta, GA.

Tidler, Z. R., (2022). *A User-Centered Investigation of Deepfake-Detection Aid Design.* Presentation to the GVU Center Colloquium, Georgia Institute of Technology, Atlanta, GA.

Tidler, Z. R., (2022). *Integrating Distributed Cognitive Ability into the Dual-Process Framework.* Presentation to the Engineering Psychology Colloquium, Georgia Institute of Technology, Atlanta, GA.

Tidler, Z. R., & Gleaton, E. C. (2021). *Attitudes Toward the Adoption of Male Contraception.* Presentation to the Engineering Psychology Colloquium, Georgia Institute of Technology, Atlanta, GA.

Tidler, Z. R., (2020). *Deepfake Detection.* Presentation to the Engineering Psychology Colloquium, Georgia Institute of Technology, Atlanta, GA.

Tidler, Z. R., (2019). *Measuring Distributed Cognitive Ability.* Presentation to the Engineering Psychology Colloquium, Georgia Institute of Technology, Atlanta, GA.

MEMBERSHIPS

Association for Psychological Science 2021-Present

Psychonomic Society, 2019-Present

Cognitive Science Society, 2019-Present

Human Factors and Ergonomics Society, 2019-Present

Graphics, Visualization, and Usability (GVU) Center, Georgia Tech, 2018-Present

PROFESSIONAL SERVICE/LEADERSHIP/OUTREACH

Departmental Assistantship October 2022, Present
Georgia Tech School of Psychology
- Developed the forum-style departmental knowledge repository that is now the standard platform for communication about department operating procedures

President (Previously Vice-President and Secretary) 2021 – 2022
Human Factors and Ergonomics Society: Georgia Tech Chapter
- Chapter received Gold Status Award from HFES National during this period

Co-Founder 2022
Georgia Tech's Annual Conference on Psychological Research (Undergraduate research conference)

Departmental Colloquium Student Coordinator 2020 – 2021
School of Psychology, Georgia Tech

President 2019 – 2020
Psychology Committee of Graduate Students, Georgia Tech,

Founder/Organizer 2019 – 2020
Outside-the-Academy Speaker Series, Georgia Tech
- Series organizing duty was passed on to others and the series continues presently.

Committee Member 2019 – 2020
Engineering Psychology Advisory Committee, Georgia Tech,

Peer-reviewing
Annual Meeting of the Cognitive Science Society (Conference)
- Proceedings Manuscript Reviewer (Invited 2024)

Computer Science Education (Journal)
- Manuscript Reviewer (2023)

Human Factors and Ergonomics Society Annual Meeting (Conference)
- Proceedings Manuscript Reviewer (2023)
- Discussion Panel Proposal Reviewer (2023)

Association for Psychological Science (Conference)

- Student Research Award Reviewer (2023)
- Student Caucus Student Grant Competition Reviewer (2023)

Frontiers in Education (Journal)
- Manuscript Reviewer (2022)

MENTORSHIP

Undergraduate Research-Assistant Coordinator 2019-Present
Problem Solving and Educational Technology Laboratory, Georgia Tech
- Mentored numerous undergraduate research assistants toward various awards, publications, conference presentations, and graduate training.

Supervised Undergraduate Thesis Projects
- Adam Snoll B.S. – 2020-2021 (Currently in a Doctoral Program at the University of Huddersfield)
  - *Psychometric Properties of "The Wikipedia Game"*
- Natalie Spingler B.S. – 2021-2022
  - *Effects of Following a Positive Instagram Account on Social Media Users*
- Emmarose Stern – Ongoing
  - *Impacts of Educational Interventions on Perceptions of Ethics of Artificial Intelligence Use in Mental Health Hotlines*
- Edith Garner – Ongoing
  - *Designing for Museum Exhibit Engagement* (Tentative Title)

MEDIA COVERAGE

Freund, K., (2021, February). Deepfake Videos. https://www.gtalumni.org/s/1481/alumni/17/magazine-pages.aspx?sid=1481&gid=21&pgid=20673

San Miguel, R., (2021, January). Building a Thesis and Testing Theories, One Deepfake Video at a Time. https://cos.gatech.edu/news/building-thesis-and-testing-theories-one-deepfake-video-time

GRADUATE COURSEWORK

Research Design
Cognitive Psychology
Sensation and Perception
Psychological Testing
History and Systems
Engineering Psychology I
Engineering Psychology II
Quantitative Analysis in Psychology I
Quantitative Analysis in Psychology II
Multivariate Statistics
Healthcare Training Seminar Human Abilities
Structural Equation Modeling
Educational Technology Foundations
Psychology of Learning Seminar
Human Abilities

Human and Machine Learning

Dynamical Systems Modeling

Research Methods in HF and HCI

SKILLS – PROGRAMMING, RESEARCH LOGISTICS, AND STATISTICAL PACKAGES

R (Advanced)

Python (Advanced)

SPSS (Advanced)

JASP (Advanced)

HTML/CSS (Intermediate)

JavaScript (Intermediate)

Git (Intermediate)

Qualtrics (Advanced)

Open-Science Framework (Intermediate)

Natural-Language Processing (Intermediate)

SKILLS – QUANTITATIVE METHODS

General/Generalized Linear Modeling (Advanced)

Latent Variable Modeling (Advanced)

- Principal Components Analysis
- EFA/CFA
- Structural Equation Modeling
- Discriminant Analysis
- Correspondence Analysis

Multilevel Modeling (Intermediate)

Multidimensional Scaling (Intermediate)

Meta-Analytic Techniques (Intermediate)

Dynamical Systems and Time-Series Analyses (Intermediate)

Machine Learning (Intermediate)

- Deep Learning (Artificial Neural Networks)
- Cluster Analyses
- Tree-Based Models

REFERENCES

Dr. Richard Catrambone, Doctoral Advisor
School of Psychology
Georgia Institute of Technology
Email: richard.catrambone@psych.gatech.edu

Dr. Phillip Ackerman, Mentor
School of Psychology
Georgia Institute of Technology
Email: phillip.ackerman@psych.gatech.edu

Dr. Tansu Celikel, Mentor
School of Psychology (Chair)
Georgia Institute of Technology
Email: celikel@gatech.edu

Dr. Chris Stanzione, Mentor
School of Psychology (Associate Chair for Undergraduate Studies)

Georgia Institute of Technology
Email: christopher.stanzione@psych.gatech.edu