

Shaun Wallace

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Education

Brown University, Dept. of Computer Science

Providence, RI

PHD COMPUTER SCIENCE (EXPECTED 2023)

2017 to 2023 (Expected)

- Advisor: Jeff Huang
- Thesis: Public Data Systems for Evolving Information

Brown University, Dept. of Computer Science

Providence, RI

MSC COMPUTER SCIENCE

2017

- Advisor: Jeff Huang

University of Limerick, Dept. of Computer Science and Information Systems

Limerick, IE

MSC MUSIC TECHNOLOGY, 1ST CLASS HONOURS

2009

- Advisor: Kerry Hagan
- Thesis: Real-time Audio Spectra Manipulation with Adaptive FM Synthesis
- Thesis System: Spectralis, the first real-time interactive example of Adaptive FM Synthesis

University of Rhode Island, College of Business

Kingston, RI

BSC MANAGEMENT SCIENCE & INFORMATION SYSTEMS, SUMMA CUM LAUDE

2008

- Placed top 5% in the world for Corporate Business strategy challenge

Professional Experience

Lead Systems Programmer

Providence, RI

BROWN UNIVERSITY, DEPT. OF COMPUTER SCIENCE

Jan 2018 - Current

- Plan, develop, and maintain over 600 distributed systems, services, and data streams.
- Develop new automated data mesh and APIs from data streams.
- Mentor staff, perform code reviews, and lead collaborations across the university.
- Mentor system programmers, perform code reviews, and lead collaborations across departments.

Research Intern

Cambridge, MA

ADOBE, CREATIVE INTELLIGENCE LAB

Jul 2019 - May 2022

- Helped to create the Readability Consortium involving Adobe, Google, UCF, & Readability Matters.
- Helped to prototype, research, and develop new features for PDFs.

Senior Application Developer

Providence, RI

BROWN UNIVERSITY, ICERM

Mar 2011 - Aug 2017

- Development team manager and lead role for design & development, of all web apps and data services.
- Technical lead of the central NSF Math Institutes web applications & data services.

RPS Group

South Kingstown, RI

SOFTWARE DEVELOPER

Jul 2010 - Nov 2010

- Develop beta of Oil Map Web software used by various governments.
- Added cross-talk communication between components in the ArcGIS framework.

University of Rhode Island, Division of Student Affairs

Kingston, RI

WEB DEVELOPER

Jan 2010 - Jun 2010

- Serve on Technology & Communications Committee for Division of Student Affairs.
- Work with 23 departments to develop new websites.

University of Rhode Island, Conference Services & Special Program Development

Kingston, RI

WEB DEVELOPER

May 2005 - Dec 2009

- Develop over 30 conference registration systems, data, and websites per year.
- Manage student workers.

Publications

Digital Reading Rulers: Evaluating Inclusively Designed Rulers for Readers With and Without Dyslexia

[CHI 23 \[to appear\]](#)

NICKLAUS A., CAI T., BYLINSKI Z., WALLACE S.* (*SENIOR ADVISING AUTHOR)

Web Table Formatting Affects Reading Speed on Mobile Devices

[WWW 23 \[to appear\]](#)

TENSMEYER C., BYLINSKI Z., CAI T., MILLER D., NENKOVA A., NIKLAUS A., WALLACE S.

Towards Individuated Reading Experiences: Different Fonts Increase Reading Speed for Different Individuals

[TOCHI 22 \[Journal\]](#)

WALLACE S., BYLINSKII Z., DOBRES J., KERR B., BERLOW S., TREITMAN R., KUMAWAT N., ARPIN K., MILLER D., HUANG J., SAWYER B.

Readability Research: An Interdisciplinary Approach

[FnT HCI \[Journal\]](#)

27* CO-AUTHORS CONTRIBUTED EQUALLY

Personalized Font Recommendations: Combining ML and Typographic Guidelines to Optimize Readability

[DIS 22](#)

CAI T., WALLACE S., REZVANIAN T., DOBRES J., KERR B., BERLOW S., HUANG J., SAWYER B., BYLINSKII Z.

The TESS Triple-9 Catalog: 999 Uniformly Vetted Exoplanet Candidates

[MNRAS 22](#)

CACCIAPUOTI L., KOSTOV V., KUCHNER M., QUINTANA E., COLÓN K., BRANDE J., MULLALLY S., CHANCE Q., CHRISTIANSEN J., AHLERS J., DI FRAIA M., DURANTINI LUCA H., IENCO R., GALLO F., DE LIMA L., HYOGO M., ANDRÉS-CARCASONA M., FORNEAR A., DE LAMBILLY J., SALIK R., YABLONSKY J., WALLACE S., ACHARYA S.

Case Studies on the Motivation and Performance of Contributors Who Verify and Maintain In-Flux Tabular Datasets

[CSCW 2021 \[Journal\]](#)

WALLACE S., PAPOUTSAKI A., TAN N. H., GUO H., HUANG J.

Optimizing Electronic Health Records Through Readability

[HFES 21](#)

BALL R.V., MILLER DB, WALLACE S., MACIAS K.C., IBRAHIM M., GONZAGA ER., KARASIK O., ROHLSSEN-NEAL D.R., BARRIENTOS S., ROSS E.A, ASMAR A., HUGHES A.M., HANCOCK P.A, SAWYER B.

Sketchy: Drawing Inspiration from the Crowd

[CSCW 20 \[Journal\]](#)

WALLACE S., LE B., LEIVA L., HAQ A., KINTISCH A, BUFREM G., CHANG L., HUANG J.

Drafty: Enlisting Users to be Editors who Maintain Structured Data

[HCOMP 17](#)

WALLACE S., VAN KLEUNEN L., AUBIN-LE QUERE M., PETERKIN A., HUANG Y., HUANG J.

Publications Short Papers

Asynchronous Collaboration Systems for Evolving Information

[CHI DC 22](#)

WALLACE S.

Debiased Label Aggregation for Subjective Crowdsourcing Tasks

[CHI LBW 22](#)

WALLACE S.*, CAI T.*, LE B., LEIVA L.* (*EQUAL CONTRIBUTIONS)

Accelerating Adult Readers with Typeface: A Study of Individual Preferences and Effectiveness

[CHI LBW 20](#)

WALLACE S., TREITMAN R., HUANG J., SAWYER B., BYLINSKII Z.

Visualizing Self-Trackd Mobile Sensor and Self-Reflection Data to Help Sleep Clinicians Infer Patterns

[CHI LBW 17](#)

WALLACE S., SASSON D., GUO H.

Small Abstracts and Invited Talks

POSTER ABSTRACTS

Space for Readability: Effects on Reading Speed from Individuated Character and Word Spacing

VSS 22

WALLACE S., DOBRES J., SAWYER B., BYLINSKII Z.

Readability for All: The Effect of Individualized Font Formats on Reading Speed and Comprehension for Students in Grades 3-8

SSSR 22

DAY S., SAWYER B., WALLACE S., TREITMAN R., CROWLEY K., JORDAN M.

Considering the Speed and Comprehension Trade-Off in Reading Mediated by Typography

VSS 21

WALLACE S., DOBRES J., SAWYER B.

Improving Reading Outcomes Using Digital Reading Rulers for Readers With & Without Dyslexia

VSS 21

WATSON A., WALLACE S.

Individual Differences in Font Preference & Effectiveness as Applied to Interlude Reading in the Digital Age

VSS 20

WALLACE S., TREITMAN R., HUANG J., SAWYER B., BYLINSKII Z.

Presented as a Talk

INVITED TALKS

- 2022 **Skoll World Forum**, Building Better Reading Through Personalized Digital Text
- 2022 **Adobe for Education Summit**, Readability Session
- 2021/22 **Adobe Tech Summit**, Inventing Beyond Barriers: Readability Research & Impact
- 2021 **Adobe Readability Research Symposium**, Personalizing Fonts to Increase Reading Speed
- 2021 **Adobe Education Leadership Summit**, Personalized Formatting for Better Readability
- 2019 **University Central Florida: HCI Course**, Building Collaborative Research Systems
- 2015 **Microsoft NERD: Quantified Self on Personal Informatics**, N=1: Food and Drink Affects on Weight

Mentorship, Teaching, Service, Awards, & Press

MENTORSHIP

(1 Co-Authored Published Paper) (2 Developed Open-Source Software) (3 Won Research Award)

- 2022 **Jiaqi Su**², Brown University
- 2020-21 **Long Do**², Brown University *now at Meta*
- 2019-21 **Diana Lee**², Brown University *now at Meta*
- 2020 **Alice Marbach**², Brown University *now at Audible*
- 2019-20 **Matthew Bejtlich**, Rhode Island School of Design
- 2019-20 **Zhengyi Peng**², Brown University, *now at Microsoft*
- 2018-19 **Brendan Le**^{1,2}, Brown University, *now at Uncountable*
- 2019 **Michael Bardakji**, Brown University, *now at Vetcove*
- 2018-19 **Neilly Tan**^{1,2}, Brown University, **now a PhD at Univ. of Washington**
- 2018 **Ari Kintisch**^{1,2}, Brown University, *now at Squarespace*
- 2018 **Andrew Park**, Brown University, *now a Masters Student at Brown*
- 2017-18 **Gabrielle Bufrem**¹, Brown University, *now at Pivotal Labs*
- 2017-18 **Aman Haq**^{1,2}, Brown University, *now at Microsoft*
- 2017 **Linda Chang**^{1,2}, Brown University, *now at Nasdaq*
- 2017 **Aarhi Anbalagan**², Brown University, *now at Microsoft*
- 2017 **Abraham Peterkin**¹, Brown University, *now at Nickelodeon*
- 2017 **Yirui Huang**^{*1}, Brown University & Univ. of Toronto, *now at Univ. of Edinburgh*
- 2016 **Marianne Aubin-Le Quere**^{1,2,3}, Brown University, **now a PhD at Cornell**
- 2016 **Lucy Van Kleunen**^{1,2,3}, Brown University, **now a PhD at Univ. Colorado**

TEACHING

- 2022 **Guest Lecture**, Computer Interface Design, Tufts University
- 2022 **CHI Course**, Research Methods for People in a Hurry: An introduction to research methods in computer-human interaction, psychology, and human factors
- 2022 **Guest Lecture**, A/B Testing, Brown University Medical School
- 2021 **Guest Lecture**, Web Development 2 – Back-End Engineering, University of Luxembourg
- 2021 **Guest Lecture**, User Interfaces & User Experience, Pomona College
- 2020 **Run Crowdsourcing Assignment**, Human-Computer Interaction Seminar, Brown University [CSCI 2300](#)
- 2018 **Guest Lecture**, User Interfaces & User Experience, Brown University [CSCI 130/1300](#)
- 2018 **Guest Lecture**, Human-Computer Interaction Seminar, Brown University [CSCI 2300](#)
- 2018 **Run Crowdsourcing Assignment**, Human-Computer Interaction Seminar, Brown University [CSCI 2300](#)
- 2017 **Graduate Teaching Assistant**, User Interfaces & User Experience, Brown University [CSCI 130/1300](#)
- 2016 **Teaching Assistant**, User Interfaces & User Experience, Brown University [CSCI 1300](#)

TRAINING

- 2022 **Certificate II: Sheridan Teaching Seminar - Course Design**, Brown University
- 2021 **Certificate I: Sheridan Teaching Seminar - Reflective Teaching**, Brown University
- 2016 **Teaching Assistant Diversity Sensitivity**, Brown University
- 2016 **Leadership Certification Program**, Brown University

VOLUNTEER

- 2021-22 **PhD Office Hours**, Brown University, **Co-Created*
- 2017-18 **First Year PhD Mentorship Program**, Brown University
- 2017 **Student Volunteer**, HCOMP
- 2008-09 **After Hours Coding Help**, University of Limerick, **Created*

SERVICE

- CHI **Reviewer**, 2017, 2018, 2019, 2020, 2021, 2022, 2023
- CHI LBW **Reviewer**, 2017, 2020
- CHI Play **Reviewer**, 2019
- CIKM **PC Member & Reviewer for Abstracts**, 2020
- CSCW **Reviewer**, 2020, 2021, 2022
- HCOMP **Reviewer**, 2017, 2019
- IJHCI **Reviewer**, 2020
- SIGIR **Reviewer**, 2018
- WWW Dev **PC Member & Reviewer**, 2018
- UIST **Reviewer**, 2018, 2021

PRESS AND MEDIA

- 2022 **Nielsen Norman Group**, Best Font for Online Reading: No Single Answer
- 2022 **Prolific**, Conduct your best research
- 2022 **Fast Company**, Are some fonts ageist?
- 2022 **Adobe**, Blog post: Readability Research: This New Field Can Help Us All Read Better
- 2021 **Adobe**, Blog post: Read different: User-centered approaches improve reading for all
- 2021 **Adobe**, Blog post: Re-imagining Reading
- 2021 **Readability Matters**, A Collaborative Interdisciplinary Readability Research Approach
- 2021 **Readability Matters**, Optimizing Electronic Health Records Through Readability
- 2021 **Hacker News**, Computer Science Open Rankings
- 2021 **South by Southwest: Digital Reading Rulers**, ** Presented by Collaborator*
- 2021 **Axe-Con: Virtual Readability Lab & Digital Reading Rulers**, ** Presented by Collaborator*
- 2020 **Adobe MAX: This Changes Everything: New Approaches to Reading**, ** Presented by Collaborator*
- 2020 **Fast Company**, Finalist for Fast Company's Annual List of World-Changing Ideas
- 2020 **EdTech Center World Education**, Readability Features & Technology for Better Reading
- 2020 **Readability Matters**, Individual Differences in Font Preference & Effectiveness
- 2020 **Readability Matters**, Using the Virtual Readability Lab with College Students
- 2020 **Readability Matters**, Virtual Readability Lab Launched
- 2020 **Readability Matters**, Accelerating Adult Readers With Typeface
- 2019 **Readability Matters**, Towards Readability Individuation...

AWARDS

- 2022 **illumi Award**, UserTesting.com
- 2021 **Fast Company's Annual List of World-Changing Ideas**, Fast Company
- 2020 **1st Place in the Just Do It Category - Digital Reading Rulers**, Adobe Hackweek
- 2020 **Sigma Xi Honor Society**, Brown University
- 2017 **Graduate Fellowship**, Brown University
- 2009 **President's Letter for Academic Excellence**, University of Limerick
- 2008 **Golden Key International Honor Society**, University of Rhode Island
- 2004 **Beta Gamma Sigma Honor Society**, University of Rhode Island

Research Systems and Datasets

Drafty: A Smarter Wiki for Data

System

AN INTELLIGENT WEB-BASED SPREADSHEET WHERE UNPAID CONTRIBUTORS MAINTAIN EVOLVING DATA
App: <https://drafty.cs.brown.edu>
Code: <https://github.com/brownhci/drafty>

CS Open Rankings

System

A META RANKER USING REAL-TIME DATA FROM CS PROFESSORS AS ONE OF ITS SOURCES
App: <https://drafty.cs.brown.edu/csopenrankings>

Computer Science Faculty Dataset

Data

OVER 4000 CS FACULTY PROFILES FROM 100 TOP US AND CANADIAN UNIVERSITIES
Data: <https://drafty.cs.brown.edu/csprofessors>

Sketchy

System

A REMOTE ASYNCHRONOUS SKETCHING CLASSROOM
App: <https://sketchy.cs.brown.edu>
Code: <https://github.com/brownhci/sketchy-1.0>

Subjective Binary Labels for Sketches

Data

LABELED INSPIRATIONAL SKETCHES FROM UI/UX CLASSROOMS
Data: <https://github.com/brownhci/sketchy-1.0/tree/master/data>

The Virtual Readability Lab

System

PERSONALIZED READABILITY EXPERIMENTS IN THE WILD
App: <https://readabilitylab.xyz>

PolyMu JS Library

Library

OPTIMIZED LOAD TIME, INDEXING, AND SCROLLING OF MASSIVE HTML TABLES
App: <https://github.com/pengzhengyi/polymu>

* Mentored Undergraduate Student

FontView Web App

System

EXTRACTING ACCURATE FONT ATTRIBUTES FROM VECTOR PATHS
App: <https://font-metrics.herokuapp.com>
Code: <https://github.com/TianyuanCai/font-metrics>