

Shaun Wallace

SOFTWARE ARCHITECT · HCI SYSTEMS RESEARCHER

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Expertise

SUMMARY

I am software architect and researcher with a diverse background in building, automating, and maintaining business and creative systems. I want to collaborate and lead teams to develop creative applications and solutions through dedicated research and human interaction. My research combines the science of crowdsourcing with mining subtle forms of human interactions to create human-in-the-loop systems. I care deeply about the pursuit of higher learning, mentorship, and collaboration to develop and enhance future ideas and technology.

Team Lead	Empower Team Members, Project Management, Agile, SCRUM, Mentorship, Code Reviews, AB & User Acceptance Testing
Languages	Java, Python, Golang, C++, MySQL, PostgreSQL, HTML5/CSS, Node, Angular, D3, Perl, PHP
Full Stack	Wildfy, Linux (CentOS, Ubuntu, Debian), Docker, LDAP/ActiveDirectory, Custom Authentication
Data	Expert Data Modeller, ETL, Visualization, Analyses, Machine Learning, Restful Web Services, API Builder
Design	UI/UX Expert, Personas, Card Sorting, Storyboarding, Iterative Low & High Fidelity Prototyping, Responsive Design

Professional Experience

Senior Systems Programmer

Providence, RI

BROWN UNIVERSITY, DEPT. OF COMPUTER SCIENCE

Jan 2018 - Current

- Lead the development of new software solutions and enhancements to existing software systems that support the delivery of computing services to educators, researchers, staff and students of the Computer Science Department.
- Design and develop system architecture, software design, implementation, testing, debugging, deployment, documentation and maintenance of new software systems and enhancements.
- Mentor system programmers, perform code reviews, and lead collaborations across department.
- Create automated ETL processes to learn trends and analyze data between new and legacy systems for the University.

Senior Application Developer

Providence, RI

BROWN UNIVERSITY, ICERM

Mar 2011 - Aug 2017

- Manager of Development team and lead role for design, development, testing of all web applications and back-end services.
- Manager and lead developer of central NSF Math Institutes web applications & data services.
- Engineer user experiences using a plethora of industry standard UI/UX best practices
- Create several automated data analysis tools and business solutions following Agile and DevOps methodologies and best practices.
- Assess, analyze, and improve business processes and workflows.
- *Project Highlight:* Architected Cube, a centralized enterprise data management platform. It is our main data collection and reporting system for research and professor data. It supports all departmental business functions. Integrates several functions of legacy applications and systems. Contributed to Vaadin open source integrations. Implements a Restful API to share public information. User and role based security, actions, and views. Uses responsive design for mobile and tablets and integrated analytics. System eliminates several departmental bottlenecks and creates a seamless user experience for staff and stakeholders.
- *Project Highlight:* Served as the Technical Lead on the NSF Joint Media Database System. A searchable media web repository for the National Science Foundation (NSF) Math Institutes. Plan and manage the agile development of the project based upon budget and grant proposal. Assess and communicate with contracted developers to ensure deliverables arrive on time and within budget.
- *Project Highlight:* Created department's initial website and branding. Also, lead a website redesign process in 2017. Designed GUI, scripts, and add-ons to enhance user experience and boost productivity for site updates and maintenance. Integrates technologies from several other in-house and external platforms for seamless updates and communication to our stakeholders.
- *Project Highlight:* Created new algorithm to systematically clean and learn from user inputted data. For example, the algorithm analyzes trends in nicknames of universities to automatically clean data. Is backwards compatible and has cleaned over 30 years worth of legacy data. Increased department's ability to generate ad-hoc and annual reports for the NSF and disseminate trends in data.

RPS

South Kingstown, RI

SOFTWARE DEVELOPER

Jul 2010 - Nov 2010

- Design cutting edge web technologies used by governments and companies around the world.
- Develop reusable frameworks and tools for internal and external clients.
- Enhance UI and UX designs for legacy Flex components.
- *Project Highlight:* Develop beta of Oil Map Web software. Upgraded alpha components and integrated new components and features of ArcGIS with Flex. Collaborated with developers to modify generated data points and Restful framework for new mapping types. Enhanced front-end code running time by more than 90%. Rewrote part of ArcGIS framework to allow for cross-talk communications between various embedded Flex components and widgets.

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. Tasked with research and decisions regarding the future use and implementation of technology to increase student retention and overall well-being.
- Work with 23 departments to develop new websites and improve UI, UX functions.
- Plan, coordinate, and manage website features and future maintenance.
- Develop timelines and scope of work for each department.
- Assist URI CSPD with IT needs and management of students.

University of Rhode Island, Conference Services & Special Program Development

Kingston, RI

WEB DEVELOPER

May 2005 - Dec 2009

- Manage & develop over 30 conference registration systems, data, and websites per year.
- Plan, coordinate, and manage over 30 small and large scale events per year.
- Budget finances and prepare contracts and timelines for events.
- Co-manage financial, AP, and AR operations for all events.
- Serve as first point of contact between potential clients and University.
- *Project Highlight:* Developed Request for Proposal System to serve as initial point of contact for potential clients. Starts the data collection process to assess their needs and begin to plan our proposal for their event.

Education

Brown University, Dept. of Computer Science

Providence, RI

PHD CANDIDATE COMPUTER SCIENCE (REACHED CANDIDACY 2018)

Current

- Advisor: Jeff Huang
- Research: Human Computer Interaction, Crowdsourcing, Collective Intelligence, Peer Production, & Data Science

Brown University, Dept. of Computer Science

Providence, RI

MSc COMPUTER SCIENCE (GPA 3.92)

2016

- 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 Software: 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

COURSEWORK

Computer Sci

Human Computer Interaction, UI/UX, Personal Informatics, Interdisciplinary Scientific Visualization, Database Management Systems, Computational Linguistics, Machine Learning, & Research Methods

Music Tech

Audio Engineering, Algorithmic Music Composition, Ethnomusicology, Programming Music Systems, Computer Systems & Models in Music, Interactive Media in Public Spaces, Sound Synthesis and Manipulation, Acoustics & Psychoacoustics

Business

Project Management, Accounting, Finance, Economics, Statistics, Business Policy, Software Development, Databases, Networking, Marketing, Operations & Supply Chain Management

DRAFTY PLATFORM FOR RESEARCH Drafty is a smarter crowd editing platform developed in Java, Go, and Docker. It

recruits editors from the crowd of web visitors to help fix out-of-date or incorrect data in a large spreadsheet. For example, visitors to a computer science professor dataset, which may contain errors, are asked to review specific data that matches their interests. These interests are mined from their interactions. For example, a visitor from brown.edu who copies entries of graphics professors will be asked to correct an entry about graphics professors at Brown. Visitors also have the opportunity to suggest fixes to other parts of the document. This data analysis has been featured in magazine articles, presented to the NSF, and used by several Computer Science Departments around the country to inform hiring decisions.

Publications

Drafty: Enlisting Users to be Editors who Maintain Structured Data

HCOMP 2017

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

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

CHI 2017 LBW

WALLACE S., SASSON D., GUO H.

Teaching, Service, & Awards

TEACHING

- 2018 **Guest Lecture - User Interfaces and User Experience**, Brown University *CSCI 130/1300*
- 2018 **Guest Lecture - Human Computer Interaction Seminar**, Brown University *CSCI 2300*
- 2017 **Graduate Teaching Assistant - User Interfaces and User Experience**, Brown University *CSCI 130/1300*
- 2016 **Teaching Assistant - User Interfaces and User Experience**, Brown University *CSCI 1300*

MENTORSHIP

- Current **Audrey Kintisch**, Brown University
- Current **Brendan Le**, Brown University
- Current **Neilly Tan**, Brown University
- Current **Andrew Park**, Brown University
- Current **Gabrielle Bufrem**, Brown University *now at Pivotal Labs*
- 2017-18 **Aman Haq**, Brown University *now at Microsoft*
- 2017 **Linda Chang**, Brown University
- 2017 **Aarthi Anbalagan**, Brown University *now at Microsoft*
- 2017 **Abraham Peterkin**, Brown University *now at Nickelodeon*
- 2017 **Yirui Huang**, Brown University *now Univ Edinburgh*
- 2016 **Marianne Aubin-Le Quere**, Brown University *now at Microsoft*
- 2016 **Lucy Van Kleunen**, Brown University *PhD at Univ. Colorado*

SERVICE

- 2018 **Reviewer**, UIST 18
- 2018 **Reviewer**, SIGIR 18
- 2018 **Program Committee and Reviewer**, WWW 18 Developer
- 2017 **Reviewer**, CHI 18
- 2017 **Student Volunteer**, HCOMP 17
- 2017 **Reviewer**, CHI 17 LBW
- 2016 **Reviewer**, CHI 17

AWARDS

- 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

CERTIFICATIONS

- 2017 **Biomedical and Social/Behavior Research Investigators and Key Personnel**, CITI
- 2017 **Responsible Conduct of Research**, CITI
- 2016 **Leadership Certification Program**, Brown University