

RESEARCH INTEREST

Intrinsically motivated professional with a background in architecture, engineering, and programming seeking to understand technology as a design medium to solve sustainability issues in construction

EDUCATION**University of California, Berkeley**

Master of Design

May 2022

University of California, Berkeley

Master of Information Management Systems

Deferred

- Human Computer Interaction Concentration
- GPA 4.0/4.0

University of Texas at Austin

Bachelor of Science in Architectural Engineering, Bachelor of Architecture

May 2016

- Dual Degree Honors Program
- GPA 3.6/4.0

RESEARCH & PROJECTS**University of California, Berkeley**

Graduate Student Researcher for Dr. Kimiko Ryokai

Jan. 2019–Dec. 2019

Berkeley, CA

- Designed laughter data visualization using automatically generated, data-driven watercolor splatter marks to represent natural laughter visually in a way that captures the essence and uniqueness of each laugh
- Conducting usability testing throughout design ideation
- Building functioning, interactive prototype of data visualization using d3, JavaScript, and HTML
- Previously assisted Dr. Ryokai with exploring tangible VR experiences

Feeling Virtual Reality

Student Designer

Aug. 2018–Dec. 2018

Berkeley, CA

- Researched the effects of temperature on level of emotional engagement in virtual reality as measured by surveys and limited usability testing
- Constructed Peltier embedded haptic glove to provide heating and cooling of hand based on real-time experience in VR

NexSmart for Solar Decathlon

Team Lead

Aug. 2014–Sep. 2015

Austin, TX

- Assembled a small team of students to develop NexSmart, a functioning custom smart home automation system for an award-winning solar home featured in Silicon Labs' IoT Hero series
- Crafted and implemented an innovative vision for how an American homeowner might digitally interact with their home and learn to reduce energy footprint
- Collected and analyzed data using surveys to determine user preference for interactions with their homes and performed competitive analysis on "smart home" systems available on the market
- Collaborated with electrical and mechanical engineering students to develop back-end infrastructure based on a Bluetooth Low Energy (BLE) module and sensors
- Worked with design students and programmers to develop a browser-based user interface; developed wireframes and mockups to convey vision to team
- Guided team by reinforcing goals to technical and design teams to arrive at a cohesive end product
- System scored full marks in "technology" category at Solar Decathlon competition, securing the team third place in engineering

Urban Plague

Jan. 2015–May. 2015

Author

Austin, TX

- Utilized knowledge of architecture, engineering, and programming to design low-cost mechanical and passive solutions for Brazilian “favelas,” or informal housing, for impoverished residents by realizing an energy simulation program contained the equations and programming needed to calculate indoor conditions of a given building using eQuest, an energy simulation program, to calculate and model the indoor conditions of a given building
- Participated in a week-long exchange program with University of São Judas Tadeu and traveled abroad to experience conditions of the favelas firsthand to understand the needs of users
- Authored undergraduate research paper and presented findings to a board of reviewers composed of industry professionals, professors, and colleagues
- Student contributor to published book “*Planning versus Participation: A False Brazilian Dilemma*” by author Fernando Lara

PROFESSIONAL EXPERIENCE**Western Digital**

May 2019–Current

Product Designer

San Jose, CA

- Catalyzed company’s focus on defensible design by promoting more user research for product development and design in a company traditionally resistant to user research
- Conceptualized and designed a tool for users to find duplicate files across multiple storage devices ranging from USB drives to cloud storage
- Collaborated with engineers to design administrator interface for NAS devices
- Designed mobile app experience for both a wireless hard drive and USB transfer device with a strong emphasis on addressing user needs and target audience
- Worked closely with product managers and senior designers to conduct competitive analysis, user research, empathy building, wireframing, prototyping, and usability tests
- Conducted a variety of design research ranging from card sorting for information architecture to unstructured user interviews
- Built a prototype of a storage drive hardware using Arduino components to convince business executives the value in having the industrial design team and product design team communicate

Wiss, Janney, Elstner Associates, Inc.

Jul. 2016–Aug. 2018

Associate II

Dallas, TX

- Designed building enclosure details to ensure air, moisture, and thermal barriers were continuous using principles of building science
- Investigated façade issues on existing buildings; performed façade assessment to determine whether architectural detailing or construction caused a breach in air, moisture, thermal barriers leading to degrading or energy inefficient buildings
- Introduced energy modeling capabilities into the company within the first year of joining out of intrinsic motivation and academic interest, which expanded the company's scope of services
- Monitored new construction at a large hospital to provide building enclosure commissioning services, headed weekly meetings for enclosure issues, performed submittal review
- Performed enclosure peer review for design and construction documents for architects
- Engaged in professional community and actively assisted with knowledge sharing (such as designing/creating a website which contains tools for various members of the industry)
- Gained extensive CAD experience drafting construction details
- Developed effective ways to convey information using 3D models rather than 2D drawings

Linbeck

May 2015–Aug. 2015

Intern

Houston, TX

- Utilized innovative construction management software as a field engineer to communicate issues to all construction trades
- Performed Quality Assurance/Quality Control for construction of a new middle school

Mooyoung Architects & Engineers

Jul. 2012–Aug. 2012

Intern

Seoul, South Korea

- Aided in large scale project management for a residential development in Abu Dhabi
- Assisted lead architect in designing master plan for a university campus in Korea

TEACHING EXPERIENCE

Graduate Student Instructor

May 2018–Dec.2018

Media Studies

Berkeley, CA

- Teaching assistant for Media Studies to provide perspective on information design in Media
- Planned and directed discussion sections to reinforce material discussed in lectures

PUBLICATIONS

Ryokai, K., Park, J., & Deng, W. (2020). Personal laughter archives. Adjunct Proceedings of the 2020 ACM International Joint Conference on Pervasive and Ubiquitous Computing and Proceedings of the 2020 ACM International Symposium on Wearable Computers. doi:10.1145/3410530.3414419

AWARDS, TITLES & FELLOWSHIPS

IDEO CoLab Design Fellow

2019

2020 Fellowship Program

Texas Board of Professional Engineers

2017

Licensed Engineer-In-Training (EIT)

University of Texas at Austin

2010-2016

Recipient, Charles C. and Lula May Wilson Endowed Scholarship \$24,000

Recipient, Mr. and Mrs. J Russell Johnson Endowed Scholarship, \$2,000

U.S. Solar Decathlon

2015

Third Place in Engineering

Fourth Place Overall

EXTRACURRICULAR INTERESTS

Texas E-Sports Association

Jul. 2012–May 2013

Head of In-House Production

Austin, TX

- Designed structure and managed construction of the sets and stages for a professional video game tournament streamed to 91,000 concurrent viewers out of passion for video games
- Managed a team of 6 volunteers to build three stage sets over the course of two years
- Stage sets were designed to visibly reflect what was occurring within the match using dynamic colors to further engage audience

Information Management Student Association

Jan. 2019–May 2019

Academic Chair

Berkeley, CA

- Nominated to position by colleagues in a blind ballot
- Regularly communicated collective needs of student body to faculty and administration
- Organized InfoCamp with board, a student-run conference centering around topics of data and design; invited industry speakers

SKILLS

AutoCAD
Revit
SketchUp
Rhinoceros

Java/C#/Python
Adobe Suite
Mathcad
Arduino/Processing

UX Design + Research
Architectural Design
Architectural Engineering
Visual Communication

Unity Dev.
Energy Simulation
Physical Fabrication
Building Science