

Ruijia (Regina) Cheng

rcheng6@uw.edu | <https://reginachangzhou.github.io>

Education

- 09/18 - **University of Washington (UW)**
 present PhD student in Human Centered Design & Engineering (HCDE)
- 06/18 **University of California, San Diego (UCSD)** *Magna Cum Laude*
 BS Cognitive Science with a specialization in Computation
 BS Mathematics/Applied Science

Graduate Research Projects

UW HCDE HDS lab

- 11/18- **Feedback-seeking in online learning communities** *advised by Gary Hsieh*
 present Studying fanfiction authors' obstacles and strategies in feedback-seeking practice
- Designed interview study with another student
 - Recruited interviewees and conducted 30 semi-structured interviews with fanfiction authors
 - Used Ground Theory methods to thematically code and analyze interview data
- 09/18- **Sentiment classification on online learning feedback** *advised by Cecilia Aragon*
 present Studying usage of sentiment classifier ALOE on comments from fanfiction.net
- Led a group of students qualitatively code 3500+ fanfiction comments
 - Calculated interrater reliability metrics; held weekly discussion sessions for interrater reliability
 - Created training and testing dataset for classification from qualitatively coded feedback

Undergraduate Research Projects

UCSD Design Lab

- 11/16- **Problem framing** *advised by Steven Dow, Joel Chan(CMU)*
 10/17 Studied effects of problem framing on distributed collaborative design
- Designed surveys for frame collection and evaluation
 - Collaborated in designing experiments and an interface for crowd idea generation
 - Qualitatively and quantitatively analyzed survey and online experiment data
 - First author of resulting working paper (See publication section)
- 07/17- **Narrative scientific computing** *advised by Jim Hollan, Adam Rule*
 12/17 Studied narrative features in scientific data analysis on a large scale of Jupyter notebooks
- Contributed to paper Exploration and Explanation in Computational Notebooks (Honorable Mention in CHI 2018)
 - Scraped, cleaned, and conducted semantic mining among 1.5 million notebooks and metadata from GitHub using Python
 - Qualitatively analyzed narrative features in notebooks and metadata
 - Designed user-participated design workshops for Jupyter notebooks extensions

- 03/17- **Jupyter notebook for education project** *advised by Jim Hollan, Adam Rule*
 06/17 Studied how students use Jupyter notebooks to study data science
- Conducted interviews & observation studies about Jupyter notebook usage in class for 3 months
 - Qualitatively analyzed observational data using affinity diagrams and quantitatively analyzed survey data using descriptive statistics
 - Designed and Developed a JavaScript extension for import history on Jupyter Notebook

UCSD Cognitive Neuroscience Lab

- 01/16- **EEG neurofeedback project** *advised by Jaime Pineda, Fiza Singh*
 12/17 Studied Effects of EEG-Gamma neurofeedback on working memory in schizophrenia (SCZ)
- Fine-tuned machine learning models (linear classification, SVM, random forest); designed and executed classification experiments using Matlab
 - Ran neurofeedback training sessions and collected EEG data on SCZ patients;
 - Performed preprocessing, ICA and power analysis on EEG data using EEGLab in Matlab

Publications and Conferences

1. **Cheng, R.**, De Castro, J., Dow, S., Chan, J. (2017) An exploratory study of problem framing in distributed collaborative design. *Working paper in 2018 ACM GROUP conference*
2. Singh, F., Smith, A., Dudeck, N., Herrera, E., Lee, J., Yang, Z., **Cheng, R.**, Pineda, J. (2016) A pilot study to assess the effects of EEG-Gamma neurofeedback on working memory in schizophrenia patients. *Poster presented at Society for Neuroscience(SfN) 2016 annual conference*

Design Projects

- 09/18- **Flappy Band** leading UX researcher in a team of 4 graduate students
 12/18 Cartoon voice-controlled wearable for K-12 student-teacher out-classroom communication
- Interviewed and observed 20+ 1st and 2nd graders; interviewed 5 teachers
 - Brainstormed and Sketched 20+ ideas; Built a paper prototypes
 - Ran usability tests on 5 students and 3 teachers using a paper prototype
 - Built a high-fidelity 3D-printed prototype and a video prototype
- 09/16- **Plug-n-talk** leading UX researcher in a team of 8 undergraduate students
 06/17 ios app prototype as a cheaper alternative to current hearing aids *UCSD Design for Senior Citizens*
- Conducted a 5 month ethnographic study of a senior community; 20+ hours of observation; 8 interviews with seniors
 - Built storyboards; held brainstorming sessions with seniors
 - Built a low-fidelity wizard-of-oz prototype and ran usability test with it
 - Resulted in a working app that reduces noise and adjusts frequency in real-time conversations

Skills

Qualitative methods: interview; field observation; persona; storyboarding; usability test; qualitative coding

Quantitative methods: survey design; A/B testing; statistical modeling

Prototyping and design: Sketch, Photoshop

Data science: Python, Matlab, R, SQL; machine learning

Software development: Python, HTML, CSS, JavaScript

Service

2019	UW HCDE master application reviewer
2019	ACM CHI 2019 Late Breaking Work reviewer