ZIXIAN (RENATA) CHAI

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EDUCATION

Master of Science Candidate, Symbolic Systems   2017 – 2019
Stanford University, GPA: 3.6/4.0
Bachelor of Arts, Computer Science and Psychology   2013 – 2017
Austin College, GPA: 3.7/4.0

HONORS AND SCHOLARSHIP

- Founder's Scholarship, Austin College
- Psi Chi (International Honor Society in Psychology)

TECHNOLOGICAL SKILLS

- Programing Languages: Java, Python, JavaScript, C++(introductory)
- Web Application Development:
    - Agile software development process, Spring MVC Frameworks (Groovy-Grails), REST API,
    - JavaScript, jQuery, HTML5, CSS3, AJAX
    - JUnit test, Spock Framework, Selenium, EasyMock
- Computer Graphics and Game Design: OpenGL, 3D modeling, Unity3D game engine, C#

SOFTWARE EXPERIENCE

Service Station Service Hour Tracking Web Application, Austin College, Sherman, TX   Fall 2015 – Spring 2016
- Worked a 28-student team to design a web application in order to help students track their service hours and generate statistical analysis and report
- Utilized Agile software development methodology, the Grails Framework, AJAX, and Selenium
- Built the prototype of the web application. Delivered effective communication with the client to understand the client's explicit and implicit needs. Used psychological and graphical knowledge to design the dashboard

Chinese Learning Mobile Application Web Application Development, Austin College, Sherman, TX   Winter 2016
- Worked in a 40-student team developing a mobile application for US college students learning Chinese. Took charge of the web application development section.

RESEARCH EXPERIENCE

Master Thesis, Stanford University   Fall 2018 – Present
"Compositionality in graphic production", mentored by Dr. Judy Fan and Dr. Michael C. Frank
- Investigate children's ability to decompose complex 2D objects (e.g. a bike drawing) into drawable primitive shapes (e.g. triangle, square) and recompose these primitives to reproduce the original object.
- Implement pixel-based and SVG-based methods to quantify children's drawing performance

Research Assistant at the Language and Cognition Lab, Stanford University   Winter 2018 – Present
- Work on a drawing project which analyzes how drawing reflects children's developmental change in object representation, perceptual-motor coordination and visual communication
- Collaborated in a 4-student team to design and implement a web application to collect children's drawings. The web application is currently running in Children's Discovery Museum of San Jose and Bing Nursery School

Psychology Honor Thesis, Austin College, Sherman, TX   Fall 2016 – Spring 2017
"Rule-based Processing and Association-based Processing in Artificial Grammar Learning", mentored by Dr. Henry Gorman
- Investigated how a rule-based variable and an association-based variable, grammar complexity and chunk strength, interact in artificial grammar learning. Presented in the Southwestern Psychological Association (SWPA) 2017 Conference's talk session

Research Assistant Summer Internship, Baylor University, Waco, TX   Summer 2016
"Topic Distance and Coherence for Latent Dirichlet Allocation", mentored by Dr. King-Ip Lin
- Evaluated how various parameters involved in a topic model latent Dirichlet allocation influence topic distance and topic coherence. Learned basic knowledge of information retrieval and the natural language processing pipeline

Research Methods Course Project, Austin College, Sherman, TX   Fall 2014
"The Relationship between Procrastination and Post-decision Dissonance", mentored by Dr. Matthew Findley
- Investigated whether post-decision dissonance is a possible predictor of procrastination. Presented in Southwestern Psychological Association (SWPA) 2015 Conference's undergraduate research competition showcase poster session