

Jenna Register

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Education

- 2012 – 2016** **University of Rochester** **GPA 3.74 cum laude**
B.S., Brain & Cognitive Science, Minor Computer Science
- 2015** **Khon Kaen University**
Development & Globalization Study Abroad in Khon Kaen, Thailand. *Gilman Scholarship Recipient*

Experience

November 2017 ***Susan B. Anthony Award for Activism from the National Organization for Women***

- 2017 – Present** **co-founder of #CodeUnlimited: teaching kids to code**
- We offer fun and engaging workshops to teach Rochester community members about technology and code.
 - **Design curriculum, build tools, build web tools and games, run workshops, teach and collect data.**

- 2015 – Present** **the Rochester BabyLab / the Computation and Language Lab: Lab Manager/Analyst/Programmer**
- Use JavaScript and Python to create experiments for adults on Mechanical Turk, children, and monkeys. Collect, visualize and analyze data in R and Python. Model human behavior with Python (using Bayesian inference and statistical methods).
 - Implemented experiment in Python and JavaScript to study different algorithms for determining if a quantity is deemed 'most'. Responsible for all data collection, visualization and analysis.
 - **Semantic verification is flexible and sensitive to context. Jenna Register, Francis Mollica, Steven T. Piantadosi (in prep)**
 - Designed and implemented interactive game on Mechanical Turk to study relational reasoning. Used combinatory logic/lambda calculus reduction engine to model human behavior and generalization about abstract relational systems.
 - **Foundations of novel knowledge systems. Jenna Register & Steven T. Piantadosi (in prep)**
 - Helped to design an experiment to study mental simulation, computational thinking, and abstract reasoning in children at the Rochester Baby Lab. Conducted the study with 3 – 7 yr olds and analyzed/visualized results.
 - **Mental simulation over the course of development. Jenna Register, Steven T. Piantadosi, Celeste Kidd, Josh Rule (in prep)**
 - Modeled learning in a speech task as a program induction problem using the Language of Thought library and MCMC, inferring what kinds of hypotheses people are using over the course of learning.
 - Designed and implemented multiple studies to research if the Zipfian distribution in language arises from how people name objects or from what they choose to attend to. Performed the analysis and independently led undergraduates in contributing to the project. (*JavaScript, Mechanical Turk, Zipf's Law*)
 - Trained to work with rhesus macaques. Ran monkeys on a counting touchscreen task that studies the algorithms that monkeys may be using to track numerosity.
 - Designed and implemented a non-verbal programming language interface for kids and rhesus macaques, inspired by programming toys like Cubetto and Lightbot. Used to study how non-human primates can compose symbols to achieve goals, similar to using a programming language. (*comparative cognition, programming toys*)
 - Designed and built an animated eyetracking task to study surprisal effects in children with autism (*Python, R, eyetracking, autism spectrum disorder, information theory*)
 - Designed and built a fun, animated eyetracking task to study infant attention across rates of information/surprisal (*Python, animation, eyetracking, infant research, information theory*)

- Learned to manage and maintain Linux servers (*Ubuntu*)
- Understand and explain unfamiliar code to undergraduate students, and write up tutorials and git READMEs for lab libraries

2014 - 2016 Department of Computer Science

- Completed projects in Artificial Intelligence: Graphical models, logical inference, game building
- Machine Learning theory – took a course in mathematical proofs behind machine learning techniques
- Designed and led a 2-week intensive course to teach Video Game Development and basic Python to highschool students. Found fun ways to introduce difficult concepts and facilitate learning.
- Designed and led computer programming workshops for college students. Very experienced with breaking down difficult concepts to easy, component parts.
- Trained in peer facilitation, workshop leading and design, and some pedagogy theory.
- Teaching Assistant : led workshops, held office hours, and graded assignments.

2013 – 2015 Department of Biology

- Teaching Assistant for Introduction to Biology/Biochemistry
- Led interactive workshops, held office hours, and graded assignments.
- Worked closely with several professors to design effective teaching methods.

2012 – 2013 Strong Memorial Hospital

- Research assistant in a Neuromuscular Dystrophy lab

Proficiencies

- **Advanced:** Python, R, JavaScript, HTML5, CSS3, LaTeX **Intermediate:** Java, bash, Linux **Beginner:** scheme, PHP, C
- Technical writing, UI design, Infographic design, Storytelling in Computer Games, Spoken Thai, French

Interests: My YouTube channel (teaching cognitive and computer science), Machine Learning, Making Ideas, Animal Intelligence, Cool Technology, Kids Education, Design, Improving Human Experience, Honeybee Communication, Educational Games, Building up Low-Income communities, Digital Art, Cooking, and Cats.