

# Daniel J. Hawthorne

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## EDUCATION

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Ph.D., Stanford University, Cognitive Psychology January, 2016  
Overall GPA 3.93/4.0  
NSF GRFP Grant \$100K+

BA with Honors, Vassar, Cognitive Science with Honors May, 2009  
Overall GPA 3.75/4.0; Major GPA 3.90/4.0  
Sigma Xi; Psi Chi

## COMPUTATIONAL SKILLS

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R, Javascript, HTML/CSS, SQL, Python, Scheme/Church/WebPPL, Git, OSX, Linux, Emacs

## DATA SCIENCE

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**Built experiment-to-analysis pipelines**—Used Javascript/HTML/CSS experiments and PHP/Python/Node backends hosted on self-maintained servers. Data was stored in SQL/MongoDB and analyzed in R (and occasionally Python with pandas). Insights were visualized with R (ggplot2) and made available through publication and interactive websites.

**Modeled human learning and decision making**—Focused on how people represent and reason about themselves and others using innovative probabilistic programming languages like Church and WebPPL. Such languages provide the tools for recursive Bayesian inference through dynamic programming and MCMC variants. Python was also used for simpler models that could be explicitly enumerated.

## RESEARCH

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**Graduate Researcher** 9/10–9/15  
Computation and Cognition Lab, Stanford University, California

- Formulated precise computational models of people’s understanding of how others learn and decide. These models of the intuitive theory underpinning social reasoning enable accurate prediction of how people learn from socially mediated information.
- Tested predictions of computational models with dynamic experiments. When possible optimal experimental design was employed to distinguish competing computational models.

**SULI Research Intern** 8/09–9/10  
Pacific Northwest National Laboratory, Washington

- Distilled expert opinion into a Bayesian network for immersive training programs.

## LEADERSHIP

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**Director and Founder** 9/07–7/09  
Let’s Get Ready, Poughkeepsie, New York

- Founded the Poughkeepsie/Vassar Let’s Get Ready Program, a non-profit that provides college application counseling and SAT tutoring to low income and first generation students.
- Secured over \$35,000 of funding for a five year trial period.
- Managed and trained 25 instructors to teach over 80 students.

## TEACHING

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**Statistics**— Teaching Assistant for two graduate courses covering generalized linear models, mixed-effects models, factor analysis/PCA, signal detection theory, regularized regression, and structural equation modeling.

**Modeling**— Teaching Assistant for the “Computation and Cognition: the Probabilistic Approach” graduate course, which details how cognitive models can be formalized as generative models in the probabilistic programming language *Church*. A range of probabilistic inference techniques are discussed.