The Cognitive, Computational Neuroscience of Memory-Guided Decisions

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Area of Research: Social Sciences-Cognitive Sciences/Psychology

Expected Duration: Academic Year and Summer

Majors: Cognitive Sciences, Computer Science, Neurobiology, Economics, Philosophy, Statistics, or other related fields.

Eligibility / Requirements:

- Intermediate-level or greater skills in at least one programming language (e.g. MATLAB, R, Python, Javascript) are **strongly** desired. However, we also have room for people who want to learn about experimental data collection.

- Familiarity with statistical methods is a plus (regression/ANOVA, maximum likelihood estimation, factor analysis).

- Previous research experience in cognitive neuroscience or related fields is a plus.

- Most important is dedicated work ethic and a willingness to commit for a term of greater than six months.

Project Details: Why do we remember the things we do? How do our memories shape our choices? The lab's ongoing research investigates how long-term memories, including for individual experiences, are stored, modified, and retrieved in service of goal-directed behavior. Specific projects in progress examine the roles of episodic and working memory in aging, childhood development, decisions for reward, perceptual inference, drug choice and addiction, and intertemporal choice, using computational model-driven analysis of behavior and brain activity (via fMRI, but with plans for EEG and other modalities). We have several ongoing or planned projects along these lines. Please come with a set of interests and goals, and we can find a project that best suits you.