Qingqing Yang

Assistant Research Scientist
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EDUCATION

New York University, NYU 09/2021 – 05/2023
M.A. in Psychology New York, N.Y.
GPA: 3.97/4.0
Courses: Computational Cognitive Modeling (PhD level), Math Tools for Cognitive Science and Neuroscience (PhD level), Introduction to Machine Learning, Cognitive neuroscience

Zhejiang University, ZJU 09/2017 – 06/2021
B.Sc. in Psychology Zhejiang, China
GPA: 3.92/4.0 (Rank 5%)
Honors: Zhejiang Province Government Scholarship (3%)
Courses: Experimental Design & Statistics in Psychology, Advanced Algebra (Math Major), Calculus (Math Major)

Research Experience

Assistant Research Scientist, NYU 08/2023 – Present
PI: Dr. Clayton E. Curtis .

***M.A. Thesis*: Modeling Working Memory Limit and Parietal Cortex Involvement**

- Designed a multi-item memory guided saccade (MGS) task in MATLAB;
- Developed a MATLAB package to analyze multi-item MGS eye-tracking data (iEye);
- Fitted Variable Precision, Mixture, and Slots models for working memory fidelity;
- Collected and analyzed fMRI data, draw visual population receptive field maps;
- Applied TMS to defined intraparietal sulcus (IPS) for causal evidence.

Assistant Research Scientist, NYU 09/2022 – Present
PI: Dr. Catherine Hartley | Supervisor: Dr. Noam Goldway

Computational Phenotyping of Decision Making in Adolescent Psychopathology

- Revised JavaScript code for Risk task, Pavlovian-Instrumental task, and Two-step task;
- Adapted Reinforcement Learning Models in Python, to qualify Pavlovian tendency, risk sensitivity and their test-retest reliability, with hierarchical Bayesian and joint modeling;
- Adapted and performed ABCD MRI procedure, relate computational phenotypes, to clinical symptoms and neural connectivity;
- Perform administrative management of over 400 enrollments, with Git, Python and R.

Research Assistant, ZJU 05/2019 – 06/2021
PI: Dr. Hui Chen

***Undergraduate Thesis*: Working-Memory-Guided Attention Competes with Exogenous Attention but Not with Endogenous Attention.** [Published]

- Completed 2 behavioral experiments to test the mechanism of WM-guided attention.

Active Inhibition of Attended Information and its Neurocognitive Mechanism

- Designed 4 experiments in MATLAB to investigate neural mechanism of attribute amnesia, which dissociates the attention and working memory;
- Collected data from over 15 subjects for each experiment, performed statistical analysis;
- Analyzed EEG data, extracted N2pc and Pd, trained the classifier to decode task features.

Active Inhibition Mechanism of Attended Information Based on Dual-Task Paradigms

- Completed 6 behavioral experiments to compare working memory of irrelevant feature and encoded but no longer useful feature.

Skills

Code	:	MATLAB, Python, R, Bash, JavaScript.
Tools	:	Git (GitHub, GitLab), High-Performance Computing (Slurm), Software Containers (Docker, Singularity), Conda, Qualtrics, Redcap.
Computational	:	Reinforcement Learning, Bayesian Inference (Stan), Artificial Neural Networks (PyTorch), Machine Learning (Scikit-learn).
Neuroscientific	:	Eye-tracking (EyeLink, iEye) ; TMS (Magstim, MagVenture, Brainsight); MRI (Siemens Prisma, AFNI, FSL, freesurfer); EEG (BrainVision, EEGLab).

Teaching

Teaching Assistant, NYU 01/2022 – 05/2022

Advanced Psychological Statistics (Undergraduate Course)

- Grade exams and homework, hold office hours;
- Lead 2 recitations sessions per week, teaching R and statistical analysis.

Publications

* Denotes those authors contributed equally to the work

Zhu, P.*, **Yang, Q.***, Chen, L., Guan, C., Zhou, J., Shen, M., & Chen, H. (2023). Working-Memory-Guided Attention Competes with Exogenous Attention but Not with Endogenous Attention. *Behavioral Sciences*, *13*(5), 426. https://doi.org/10.3390/bs13050426

Conference Presentations

Yang, Q., Li, M., & Curtis, C. Modeling Effects of Interrupting Parietal Cortex Neural Activity on Working Memory Limit. *Neuromatch Conference (NMC)*, Sep 2022. [Poster]

Goldway, G., Solomyak, L., Karni, G., Zorowitz, S., Stollar, R., **Yang, Q.**, Nielsen, S., Cuevas, R., Bizzell-Hatcher, G, Gal Shoval, Eldar, E., Niv, Y., & Hartley, A., C. Reliability of a Reinforcement-Learning Task Battery for Computational Phenotyping of Decision-Making in Adolescent Psychopathology. *Computational Psychiatry Conference (cpconf)*, Jul 2023. [Poster]