Qingqing Yang

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EDUCATION

New York University, NYU   09/2021 – 05/2023
                                                                New York, N.Y.
M.A. in Psychology
> *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
                                                                Zhejiang, China
B.Sc. in Psychology
> *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]