Dalin (Darlene) Guo

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Education

University of California San Diego — **La Jolla, CA**
Ph.D. Student in Cognitive Science — Sept., 2018 - June, 2021 *(expected)*
Ph.D. Student in Electrical and Computer Engineering — Sept., 2016 - June, 2018

University of California San Diego — **La Jolla, CA**
M.S. in Intelligent System, Robotics and Control, ECE, GPA: 3.97/4.0 — Sept., 2016 - June, 2018

University of California San Diego — **La Jolla, CA**
Exchange Student, EECS, GPA: 3.94/4.0 — Sept., 2015 - Mar., 2016

Beijing Institute of Technology — **Beijing, China**
B.S. in Signal and Image Processing, Electrical Engineering, GPA: 90/100 — Sept., 2012 - June, 2016

Skills

Python, Matlab, Java, C, TensorFlow, Git, Vim, LaTeX
Bayesian Methods, Statistics, Stochastic Control, Computer Vision, Sparse Signal Recovery

Publications

Guo, D, Yu, AJ (2018). Why so gloomy? A Bayesian explanation of human pessimism bias in the multi-armed bandit task. *Advances in Neural Information Processing Systems*, **32**. *(Scores: 8, 8, 7)*

Harlé, K M, **Guo, D**, Zhang, S, Paulus, M, Yu, AJ (2017). Anhedonia and anxiety underlying depressive symptomatology have distinct effects on reward-based decision-making. *PLoS ONE* 1**2**(10):e0186473.

Conference Posters & Talks

Guo, D, Yu, AJ (2018). Humans underestimate reward probability and overestimate environmental volatility in a multi-armed bandit task - insights from a Bayesian analysis of human learning and decision-making. *SfN Annual Meeting*, San Diego, CA, USA (**Oral**)

Guo, D, Meyniel F., Yu. AJ (2018). Recovering human reward expectation in a bandit setting using Bayesian models. *CoSyNe Abstracts 2018*, Denver, CO, USA *(acceptance rate: 56%)*

Guo, D, Yu, AJ (2017). Human learning and decision-making in the multi-armed bandit task. *Women in Machine Learning Workshop*, Long Beach, CA, USA

Guo, D, Yu, AJ (2017). Dependence of reward-based learning and decision-making on environmental statistics such as reward abundance and variance. *SfN Annual Meeting*, Washington D.C., USA

Research Experience

Computational & Cognitive Neuroscience Lab, UC San Diego — La Jolla, CA
Graduate Student Researcher, Advisor: Angela J. Yu — Sept., 2016 - Present
Bayesian predictive modeling of human learning and decision-making in multi-armed bandit task
- Recovered and explained human irrationality of a low prior reward expectation (NIPS 18)
- Compared human decision-making vs. various reinforcement learning models (WiML 17)
- Investigated impaired decision-making process of depressed population via modeling (PloS 17)

Center for functional MRI, UC San Diego — La Jolla, CA
Undergraduate Research Intern, Advisor: Thomas T. Liu — July, 2015 - Mar., 2016
- Examined various motion correction techniques, and incorporated into a fMRI pre-processing pipeline
- Performed resting-state fMRI connectivity analysis within and across subjects

Internship

Twitter Cortex — London, UK
Machine Learning Researcher Intern — June, 2019 - Sept., 2019

IBM China Development Lab — Beijing, China
Technical Intern, PureApplication team — May, 2016 - Aug., 2016
- Set up environment and installed software products on multiple virtual servers based on Ansible
- Built a mock server for software development testing based on IBM Rational Integration Tester

Teaching Experience

COGS 118A Intro to Machine Learning, UC San Diego — La Jolla, CA
Teaching Assistant — Fall 2018
- Rigorous introduction to ML, covering fundamentals and hands-on skills in supervised learning

COGS 118D Stats/Behavioral Data Analysis, UC San Diego — La Jolla, CA
Teaching Assistant — Winter 2017 & Winter 2018
- Mathematically sophisticated course covering both classical and Bayesian statistical methods

COGS 178 Genes, Brains, and Behavior, UC San Diego — La Jolla, CA
Teaching Assistant — Spring 2019
- Methods for investigating genotype to phenotype mapping