Dalin (Darlene) Guo

SSRB 248, 9500 Gilman Dr., La Jolla, CA, 92093
(858)-405-0315, dag082@ucsd.edu, dalinguo.github.io

Education

University of California San Diego — **La Jolla, CA**
Ph.D. Student in Cognitive Science — Sept., 2018 - June, 2022 *(expected)*

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 it in fMRI pre-processing pipeline
- Performed resting-state fMRI connectivity analysis within and across subjects

Internship

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

Awards & Fellowships

Dec., 2018 - Neural Information Processing Systems Travel Grant
Dec., 2018-2017 - Woman in Machine Learning Travel Grant
Sept., 2018-2022 - Departmental fellowship, CogSci department, UCSD
March, 2018 - Cosyne Presenters Travel Grant *(one of 20 recipients)*
Sept., 2017 - UCSD Graduate Student Travel Grant
Sept., 2016 - Departmental fellowship, ECE department, UCSD
Sept., 2013-2015 - Merit based departmental scholarship, BIT
Sept., 2012 - Mizuho Scholarship