Dalin (Darlene) Guo

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Education

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

University of California San Diego — **La Jolla, CA**
M.S. in Intelligent System, Robotics and Control, ECE, GPA: 3.9/4.0 — Sept., 2016 - June, 2018

University of California San Diego — **La Jolla, CA**
Exchange Student, EECS, GPA: 3.9/4.0 — 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, Java, TensorFlow, SQL, HTML, Javascript, php, Git, LaTeX
Machine Learning, Reinforcement Learning, Deep Learning, Bayesian Methods, Statistics

Publications

Guo, D, Ktena, S, Myana, P, Huszar, F, Shi, W, Tejani, A (2020). Deep Bayesian Bandits: Exploring in Online Personalized Recommendations. *RecSys. (acceptance rate: 20%, scores: 3,4,5)*

Guo, D, Yu, AJ (2018). Why so gloomy? A Bayesian explanation of human pessimism bias in the multi-armed bandit task. *NeurIPS. (acceptance rate: 20%, 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* 12(10):e0186473.

Industry Experience

Facebook, Feed and Story Content Recommendation team — Menlo Park, CA
Software Engineer Intern, Machine Learning — July, 2020 - Sept., 2020
- Implemented a backend service to recommend exploratory items based on similarity models
- Built a web demo tool to display exploratory items for offline model analysis
- Researched on incorporating reinforcement learning techniques into current production system

Twitter, Cortex Applied Machine Learning team — London, UK
Machine Learning Researcher Intern — June, 2019 - Sept., 2019
- Simulated multiple Deep reinforcement learning algorithms of contextual bandits for ads display
- implemented the best model, which also achieved a better performance in online AB test (RecSys 20)

IBM China Development Lab, PureApplication team — Beijing, China
Technical Intern — 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

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 tasks
- Investigated different uncertainty-driven computational factors for human exploratory behaviors
- Recovered and explained human irrationality of a low prior reward expectation (NeurIPS 18)
- Compared human decision-making vs. various reinforcement learning models
- 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
- Experimented various motion correction techniques in a fMRI pre-processing pipeline
- Performed resting-state fMRI connectivity analysis within and across subjects

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