

# Ge Shi

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Passionate Ph.D. student in computer science with the research interest in general Artificial Intelligence, Machine Learning and Data Mining. My research focus of Ph.D. program is in Explainable AI (XAI).

## Education

† *Indicates expected*

- 2019–2024 † Ph.D. student, Computer Science, University of California, Davis  
Primary Instructor: Ian Davidson
- 2017–2019 M.S., Computer Science, University of Massachusetts, Amherst
- 2013–2017 B.S., Engineering in Automation, Zhejiang University

## Publication

- Impact IF 5.4 JSmucny, J., Shi, G., & Davidson, I. "Deep Learning in Neuroimaging: Overcoming Challenges With Emerging Approaches." *Frontiers in Psychiatry* 13 (2022).
- Impact IF: 5.7 Shi, G., Smucny, J., & Davidson, I. "Deep Learning for Prognosis Using Task-fMRI: A Novel Architecture and Training Scheme." *Proceedings of the 28th ACM SIGKDD Conference on Knowledge Discovery and Data MInIng*. 2022.
- Impact IF: 7.4 Smucny, J., Shi, G., Lesh, T. A., Carter, C. S., & Davidson, I. "Data augmentation with Mixup: Enhancing performance of a functional neuroimaging-based prognostic deep learning classifier in recent onset psychosis." *NeuroImage: Clinical* 36 (2022): 103214.

## Research

**Explainable AI and Transparent Models**

2023–Present CAM Guided Cycle-Consistent Generative Models, Hamed Pirsiavash, UC Davis  
 2023–Present Learning Common Combos in Reinforcement Learning, Xin Liu, UC Davis  
 2022–Present Hierarchical Aggregation of Local Explanations, Ian Davidson, UC Davis  
 2023 Winter Loss Landscapes for Image Segmentation, Talita Perciano, LBNL  
 2023 Fall CRF-transplant: A Novel Technique to Improve Segmentation, Yaoqing Yang, LBNL  
 2023 Summer Rethinking Baseline of IG from the Perspective of Shapley Value, UC Davis  
 2023 Spring LossLens: Diagnostics for Machine Learning Models, Gunther H. Weber, LBNL

### **Deep Learning with Complex Data**

2023–Present Benchmarking the Chaos Mining of Neural Networks, Ian Davidson, UC Davis  
 2022–Present Fusion of Multi-Modalities in Brain Cognitive Clinical, Ian Davidson, UC Davis  
 2021–2022 Mixup Augmentation in Neuroimaging, Ian Davidson, UC Davis  
 2021–2022 Novel DL Approach in MVMi Setting (KDD), Ian Davidson, UC Davis  
 2021 Fall Survey of DL in Neuroimaging (Challenges and Methods), Ian Davidson, UC Davis  
 2020 Spring GAN-based Data Augmentation and Memorization, Ian Davidson, UC Davis

### **Computer Vision and Graph Applications**

2022–Present Extendable Multi-source Domain Adaptation, Ian Davidson, UC Davis  
 2018–2019 Super Congealing for Video Stabilization, Erik L-Miller, UMass Amherst  
 2018 Fall Moving Object Segmentation, Erik L-Miller, UMass Amherst  
 2018 Spring Semantic Image Segmentation, Subhansu Maji, UMass Amherst  
 2017 Spring Multi-Source Information Based SLAM Design, Yu Zhang, Zhejiang University

### **Teaching Assistant**

2024 Winter	ECS 170, Introduction to Artificial Intelligence	UC Davis
2022 Winter	ECS 170, Introduction to Artificial Intelligence	UC Davis
2021 Winter	ECS 170, Introduction to Artificial Intelligence	UC Davis
2020 Spring	ECS 271, Machine Learning and Discovery	UC Davis
2020 Winter	ECS 036, Programming in C	UC Davis

### **Supervision**

### **Professional Activities**

- Reviewer, The 38th Annual AAAI Conference on Artificial Intelligence, 2023.
- Reviewer, Frontiers in Neuroscience, 2023.

### **Awards**

- UC Davis academic traveling award, 2023.
- UC Davis academic traveling award, 2022.
- Meritorious Winner in The International Mathematical Contest in Modeling, 2017
- 2nd Place in Robocup Kidsize Humanoid League, 2016
- Zhejiang University Outstanding Student Leadership Award, 2015
- Zhejiang University Excellent Academic Scholarship, 2014