

YONGSHENG MEI

+1 (571)331-0829 ◊ ysmei@gwu.edu ◊ [LinkedIn](#) ◊ [GitHub](#) ◊ [Homepage](#)

SKILLS

Programming	Python, C, C++, MATLAB, Java, Go, R, Verilog
Libraries	PyTorch, TensorFlow, Keras, Scikit-Learn, NumPy, Pandas, Matplotlib
Databases	MySQL, PostgreSQL, Microsoft SQL, NoSQL
Tools	Vim, Git, Linux Bash, PySpark, Jupyter, L ^A T _E X, Visual Studio, Tableau, AWS

EDUCATION

The George Washington University	Sept. 2019 – Present
Ph.D. in Electrical Engineering, GPA: 4.00	<i>Washington, DC, US</i>
Huazhong University of Science and Technology	Sept. 2015 – June 2019
B.E. in Automation Engineering, GPA: 3.81	<i>Wuhan, Hubei, China</i>

EXPERIENCE

Research Assistant	Sept. 2019 - Present
<i>George Washington University, Lab for Intelligent Networking and Computing</i>	<i>Washington, DC, US</i>
Topic 1: Stochastic Modeling and Bayesian Optimization (BO)	April 2022 – Present
· Led to develop BO models for determining local optimal solutions for hyperparameter tuning where optimal solutions are unreachable; and use doubly stochastic point process to estimate arrival intensity (outperforming baselines in 7 out of 9 settings) and detect regions of interest in discrete spatial/time series data .	
Topic 2: Reinforcement Learning (RL)	Aug. 2020 – Present
· Led several multi-agent RL projects, such as MAC-PO and AccMER , to develop a prioritized experience replay scheme (outperforming baselines by 10%) and data-reuse strategy for acceleration (by 34.8%).	
Topic 3: Multimodal Medical Image Segmentation	Feb. 2021 – Dec. 2022
· Led to develop a multimodal image segmentation model for brain tumor MRI data. The framework can improve segmentation accuracy via self-attention with extracted correlated common information microstructures among modalities. The method achieves 92% accuracy for the whole tumor on the BraTS-2020 dataset.	
Topic 4: Network Security via Protocol Customization	Sept. 2019 – Aug. 2021
· Led a project, MPD , to develop a reliable self-synchronizing moving target defense via customized network and Internet of Things protocols. The system can defend against common attacks, such as MITM and DoS.	

Visiting Researcher	June 2023 – Aug. 2023
<i>Purdue University, Intelligence Optimization for Networks Lab</i>	<i>West Lafayette, IN, US</i>
Led to develop a continual federated learning model with time-variant input of each edge device. The model uses the diffusion model to generate synthetic data to avoid the catastrophic forgetting problem during learning.	

Electronic Engineer Intern	Feb. 2017 – Aug. 2017
<i>HUST Electrical and Electronic Technology Innovation Center</i>	<i>Wuhan, Hubei, China</i>
Led the printed circuit board design and FPGA programming for an adaptive signal filter and won the Runner-Up Prize in the 2017 National Undergraduate Electronic Design Contest.	

REPRESENTATIVE PAPERS

- Yongsheng Mei**, Mahdi Imani, and Tian Lan, *Bayesian Optimization through Gaussian Cox Process Models for Spatio-temporal Data*, ICLR, May 2024. [\[PDF\]](#)
- Yongsheng Mei**, Hanhan Zhou, Tian Lan, Guru Venkataramani, and Peng Wei, *MAC-PO: Multi-Agent Experience Replay via Collective Priority Optimization*, AAMAS, 2023. [\[PDF\]](#)
- Yongsheng Mei**, Tian Lan, and Guru Venkataramani, *Exploiting Partial Common Information Microstructure for Multi-Modal Brain Tumor Segmentation*, ICML-ML4MHD, 2023. [\[PDF\]](#)
- Yongsheng Mei**, Kailash Gogineni, Tian Lan, and Guru Venkataramani, *MPD: Moving Target Defense through Communication Protocol Dialects*, SecureComm, 2021. [\[PDF\]](#)