YONGSHENG MEI

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TECHNICAL SKILLS

Programming	Python, C, C++, MATLAB, Java, SQL, R, Verilog
Libraries	PyTorch, TensorFlow, Keras, Scikit-Learn, NumPy, Pandas, Matplotlib, BoTorch
Databases	MySQL, PostgreSQL, Microsoft SQL, NoSQL
Tools	Vim, Git, Bash, GDB, PyCharm, Jupyter, LaTeX, Visual Studio, Altium Designer

EDUCATION

The George Washington University (GWU) Sept. 2019 – Present
Ph.D. in Electrical Engineering, GPA: 4.00 *Washington, DC, US*

Huazhong University of Science and Technology (HUST) Sept. 2015 – June 2019
B.E. in Automation Engineering, GPA: 3.81 *Wuhan, Hubei, China*

EXPERIENCE

Research Assistant Sept. 2019 - Present
Lab for Intelligent Networking and Computing (LINC), GWU *Washington, DC, US*

Topic 1: Bayesian Optimization (BO) May 2022 – Present

· Led to develop several novel **BO frameworks** for determining local optima with the gradient information for hyperparameter tuning, and estimate arrival intensity with the peak, idle time, and change point detection for doubly stochastic point process.

Topic 2: Multi-Agent Reinforcement Learning (MARL) Aug. 2020 – Present

· Led several MARL projects, such as **MAC-PO** and **AccMER**, to develop an optimized prioritized experience replay MARL scheme and data-reuse strategy for MARL acceleration.

Topic 3: Multi-modal Medical Image Processing Feb. 2021 – Dec. 2022

· Led to develop a **multi-modal segmentation model** for brain tumor MRI images via data fusion and attention with extracted correlated common information microstructures among modalities.

Topic 4: Network Security via Protocol Customization Sept. 2019 – Aug. 2021

· Led a project, **MPD**, to develop a reliable application-layer moving target defense model via customized communication protocols with dynamic synchronization and management.

Visiting Scholar June 2023 – Aug. 2023
Intelligence Optimization for Networks (ION) Lab, Purdue University *West Lafayette, IN, US*

Collaborated with Prof. Christopher Brinton on developing a **class-incremental federated learning model**, and used the **diffusion model** as the generative model for the server and clients for better learning performance.

Electronic Engineer Student Intern Feb. 2017 – Aug. 2017
Electrical and Electronic Technology Innovation Center, HUST *Wuhan, Hubei, China*

Led the printed circuit board design and FPGA programming for an adaptive signal filter and won the **Second Prize** of Hubei Province in the 2017 National Undergraduate Electronic Design Contest.

REPRESENTATIVE PAPERS

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