Enguang Fan

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Education

University of Illinois, Urbana-Champaign, Urbana, USA — 2024 – 2028(expected)
*Ph*D in Computer Science

University of Illinois, Urbana-Champaign, Urbana, USA — 2022 – 2024
*M*aster of Computer Science

University of Illinois, Urbana-Champaign, Urbana, USA — 2019 – 2022
B.S. in Statistics & Computer Science, **The Highest Distinction**

Beijing Jiaotong University, Beijing, China — 2017 – 2019
Transferred *to UIUC*, majored in Telecommunication Engineering

Research Experience

Probablistic Programming — May 2020 – Feb 2021

- Led the creation and implementation of a cutting-edge system for transforming probabilistic programs. This involved devising algorithms that automatically modify program structures to enhance robustness against data variability and uncertainty.
- Pioneered the integration of advanced statistical methods within the system, enabling it to anticipate and adapt to diverse probabilistic scenarios, significantly improving the accuracy and reliability of program predictions.
- Conducted extensive robustness assessments of probabilistic programs using Stan and R. My involvement in benchmarking, simulation, and performance modeling contributed to breakthroughs in understanding program behavior and efficiency under varying conditions, setting new standards in the field.

Teaching Experience

CS 341 System Programming

Graduate Teaching Assistant, Fall 2022

- Facilitated student understanding of UNIX system calls in C programming, covering process creation, I/O operations, and network communication.
- Guided students in concurrency and synchronization techniques, emphasizing the use of semaphores and mutexes for effective thread management.
- Mentored students in mastering UNIX system calls for efficient C program development, encompassing process creation, I/O operations, and network communication.
- Guided students through robust concurrency models, emphasizing synchronization techniques like semaphores and mutexes for thread management and coordination.
- Assisted students in advanced I/O handling, file system interactions, and process control mechanisms, fostering in-depth comprehension of process lifecycle and system interaction.

CS 437 Topics in Internet of Things

Graduate Teaching Assistant, Fall 2023

- Guided students in IoT lab sessions, assisting with vehicle assembly and sensor integration for real-world IoT applications.
- Mentored advanced labs on spatial mapping, involving ultrasonic sensor data processing and visualization for informed navigation decisions.
- Collaborated with instructors to deliver a comprehensive IoT curriculum, covering protocols, sensing, cloud platforms, and real-world project deployments.

Honors

- UIUC Fall 2022 Teachers(TA) Ranked as Excellent by Their Students [Link]
- First Class Academic Scholarship at Beijing Jiaotong University (Top 3% in GPA)

Skills

- Programming: C/C++, Python, Matlab,
- Tools: PyTorch, Tensorflow, NumPy, OpenCV, ROS, CMake, Gazebo, PX4
- Techniques: Object-Oriented Design, Unit Testing