Ye Htet

+1 (314)-398-0886 htet.ye@wustl.edu linkedin.com/in/htet-ye https://htet-ye.github.io/

Education

Washington University in Saint Louis (GPA: 3.8/4.0) **Aug 2021 – Dec 2026**
Ph.D. Candidate in Computer Science, advised by Dr. Jeremy Buhler *Saint Louis, MO*

Illinois College
B.Sc. in Computer Science

Skills

Programming Languages: Python, C/C++, Bash, CUDA, OpenMP, LaTeX

Tools: PyTorch, Lightning, vLLM, HuggingFace, ONNX, SimPy, sklearn, WandB, Numpy, Pandas, Matplotlib, Scipy, Git, Docker, Linux

Others: AL/ML, LLM, Normalizing Flows, SFT, RLHF, GRPO, MechInterp, Parallel Computing, Model Optimization, Systems Modeling, High Performance Computing, Simulations

Work Experience

AI Strategy Consultant, Frontier Tech **Apr 2025 – Present**
Scale AI *Remote*

- Enabling data ingestion entry to a unified schema from diverse training data queues by mapping data taxonomies, expanding the coverage of the monitoring pipeline and debugging the ingestion algorithm.
- Investigated LLM tool use using GRPO training with the BFCL dataset and applying CoT mechanistic interpretability framework for evaluating reasoning trajectories.
- Collaborated with 10+ cross-functional teams of research scientists, and product managers in solving diverse projects spanning data generation and model benchmarking resulting in an ICLR 2026 paper.

Research Experience

System Design of Physics-Based AI/ML Software **Aug 2023 – Dec 2025**
Washington University in Saint Louis *Saint Louis, MO*

- Modeling the performance of an embedded system using physics-based simulation in C++, and discrete-event simulation in SimPy to gain key insights to the runtime behavior of the system.
- Using optimization methods on components (combinatorial, AI/ML, and iterative algorithms) to meet low-latency constraints in a cooperation between a pipeline with data processing in a stream and a tracking system.
- Testing and analyzing the components for proper functioning using statistical testing, visualization, and documentation.

AI/ML for Resource-Constrained Platform **May 2023 – Jan 2024**
Washington University in Saint Louis *Saint Louis, MO*

- Led the development of a full deep learning pipeline in Python for training and testing physics-guided neural network models for a scientific application (GRB localization) using Pytorch Lightning and WandB.
- Applied model compression method such as quantization to enable the realistic deployment of the neural network models for real-time localization using an embedded test-bed in C++.
- Mentored a master's student to use RayTune for the parallel distributed automatic hyper-parameter tuning of the model optimization space, resulting in smaller and accurate models

Data Analysis of Stream Processing Pipeline **Aug 2021 – May 2023**
Washington University in Saint Louis *Saint Louis, MO*

- Investigated data analysis of a C++ computational pipeline using python libraries such as numpy, pandas and matplotlib, identifying the impacts of uncertainties in the sensor measurements leading to significant improvement in localization accuracy.
- Collaborated with several team members within a multi-institutional project for the development and analysis of a computational pipeline for gamma-ray bursts localization.

Publications

- **Ye Htet**, Marion Sudvarg, Honghao Yang, Jeremy Buhler, Roger Chamberlain, and James Buckley. **"Modeling and Optimizing Real-time Telescope Interaction for Multi-wavelength Observation of Gamma-ray Bursts"**. Sixth Combined Workshop on Interactive and Urgent High-Performance Computing (WIUHPC), November 2025. Held in conjunction with SC 2025.
- **Ye Htet**, Marion Sudvarg, Andrew Butzel, Jeremy Buhler, Roger Chamberlain, James Buckley. **"Machine Learning Aboard the ADAPT Gamma-Ray Telescope"**. The Fifth Workshop on Artificial Intelligence and Machine Learning for Scientific Applications (AI4S), November 2024. Held in conjunction with SC 2024.
- **Ye Htet**, Marion Sudvarg, Honghao Yang, Jeremy Buhler, Roger Chamberlain, Wenlei Chen, James Buckley, and the APT Collaboration. **"Performance Modeling and Improvements on the GRB Source Localization Streaming Pipeline Aboard the Antarctic Demonstrator for the Advanced Particle-Astrophysics Telescope (ADAPT)"**. In Proc. of 39th International Cosmic Ray Conference — PoS(ICRC2025), volume 501, pages 679:1–679:9, July 2025.
- Daisy Wang, **Ye Htet**, Marion Sudvarg, Roger Chamberlain, Jeremy Buhler, and James Buckley. **"Coordinating instruments for multi-messenger astrophysics"**. In Proc. of 22nd ACM International Conference on Computing Frontiers Workshops and Special Sessions, pages 213–218, May 2025. Invited paper at the conference Special Session on Computer Architectures in Space (CompSpace)".
- Marion Sudvarg, Chenfeng Zhao, **Ye Htet**, Meagan Konst, Thomas Lang, Nick Song, Roger D. Chamberlain, Jeremy Buhler, and James H. Buckley. **"HLS taking flight: Toward using high-level synthesis techniques in a space-borne instrument"**. In Proc. of 21st ACM International Conference on Computing Frontiers (CF), pages 115–125, May 2024. ACM Badges: Artifacts Evaluated - Functional, Artifacts Available, Results Reproduced.
- **Ye Htet**, Marion Sudvarg, Jeremy D. Buhler, Roger D. Chamberlain, and James Buckley. **"Localization of Gamma-ray Bursts in a Balloon-Borne Telescope"**. The First Workshop on Enabling Predictive Science with Optimization and Uncertainty Quantification in HPC (EPSOUQ), November 2023. Held in conjunction with SC 2023.
- **Ye Htet**, Marion Sudvarg, Jeremy Buhler, Roger D. Chamberlain, Wenlei Chen, James H. Buckley for the APT collaboration. **"Prompt and Accurate GRB Source Localization Aboard the Advanced Particle Astrophysics Telescope (APT) and its Antarctic Demonstrator (ADAPT)"**. In Proc. of 38th International Cosmic Ray Conference – PoS(ICRC2023), volume 444, pages 956:1–956:9, July 2023.

Teaching Experience

Washington University in Saint Louis **Aug 2023 – May 2024**
Assistant in Instruction (Mentor: Dr. Roger Chamberlain) *Saint Louis, MO*

- Taught a graduate-level **high performance computing** systems course how to use a profiling and analysis tool (TAU) for the assignments.
- Held office hours for a graduate-level **computer architecture** class once every week to answer questions and review material taught in class.
- Developed students' understanding of fundamental concepts necessary to work on lab assignments and promoted a mastery of the practice problems as review for the exams.

Washington University in Saint Louis **Dec 2023 – May 2024**
Teaching Assistant - CSE 566S High Performance Computer Systems

Washington University in Saint Louis **Aug 2023 – Dec 2023**
Teaching Assistant - CSE 560M Computer Architecture

Honors & Awards

- **Thomas Smith Prize**: Honor Prize for first year excellence in Mathematics.
- **Levy, Ray & Shoup Scholarship**: Scholarship Award for excellence in Computer Science.
- **Alpha Lambda Delta**: National Honor Society to recognize the high academic achievement of first-year students.
- **Rammelkamp Honor Scholar**: Illinois College honor for highest cumulative grade point average.
- **Damsgaard-Carlson Debate Scholarship**: Scholarship Award for excellence in Debate.
- **George Gridley Wood Award**: Award for excellence in Speech and Debate.