

# YE HTET

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## EDUCATION

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### Washington University in Saint Louis (GPA: 3.8/4.0)

*Ph.D. Candidate in Computer Science, advised by Dr. Jeremy Buhler*

**Aug 2021 – Aug 2026**

*Saint Louis, MO*

### Illinois College

*B.Sc. in Computer Science*

## SKILLS

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

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

## WORK EXPERIENCE

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### AI Strategy Consultant, Frontier Tech

*Scale AI*

**Apr 2025 – Present**

*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.
- Contributed to the development of evaluation rubrics and scoring methodologies to benchmark frontier models.
- Collaborated with 10+ cross-functional teams of research scientists, product managers, and machine learning engineers in solving diverse projects spanning data generation and model benchmarking.

## RESEARCH EXPERIENCE

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### System Design of Physics-Based AI/ML Software

*Washington University in Saint Louis*

**Aug 2023 – Present**

*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

*Washington University in Saint Louis*

**May 2023 – Jan 2024**

*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

*Washington University in Saint Louis*

**Aug 2021 – May 2023**

*Saint Louis, MO*

- Developed a Python library and tools that model and perform various data aggregations and transformations for efficient analysis of the output data generated by the pipeline.
- 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

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- **Ye Htet**, Marion Sudvar, 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 (WUHP), November 2025. Held in conjunction with SC 2025.
- **Ye Htet**, Marion Sudvar, 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 Sudvar, 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 Sudvar, 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 Sudvar, 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 Sudvar, 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 Sudvar, 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

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### 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

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- **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.