# KYLE MONTGOMERY

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### **OBJECTIVE**

First-year CS PhD student at Washington University in St. Louis with extensive practical and research experience in machine learning, deep learning, natural language processing (NLP), and software engineering.

### **EDUCATION**

PhD in Computer Science, Washington University in St. Louis, GPA: 3.98/4.00 2024 - Present MS in Computer Science, Washington University in St. Louis, GPA: 4.00/4.00 2023 - 2024 BS in Computer Science and Mathematics, Washington University in St. Louis, GPA: 3.99/4.00 2019 - 2023

## **PUBLICATIONS**

Y Potter\*, Z Wang\*, N Crispino\*, A Xiong\*, **K Montgomery\***, F Pinto, E Chang, Y Chen, C Christodoulopoulos, M Ziyadi, R Gupta, C Wang, B Li, D Song. (2025). VMDT: Decoding the Trustworthiness of Video Foundation Models. Under review at the International Conference on Computer Vision (ICCV 2025).

K Montgomery\*, D Park\*, J Tu, M Bendersky, B Gunel, D Song, C Wang. (2025). Predicting Task Performance with Context-aware Scaling Laws. Under review at the Association for Computational Linguistics (ACL 2025).

L Phan, A Gatti, Z Han, N Li, W Zhang, N Crispino, C Wang, D Li, J Shen, **K Montgomery**, H Szlyk, T Wang, S Yoe, A Wang, D Hendrycks, many others. (2025). Humanity's Last Exam. In arXiv preprint 2410.12784.

S Tan\*, S Zhuang\*, K Montgomery\*, W Tang, A Cuadron, C Wang, R Popa, I Stoica. (2025). JudgeBench: A Benchmark for Evaluating LLM-based Judges. International Conference on Learning Representations (ICLR 2025).

E Pasewark\*, **K Montgomery\***, K Duan, D Song, and C Wang. (2024). Re-Tuning: Overcoming the Compositionality Limits of Large Language Models with Recursive Tuning. Association for Computational Linguistics (ACL 2024).

N Crispino, K Montgomery, F Zeng, D Song, and C Wang. (2024). Agent Instructs Large Language Models to be General Zero-Shot Reasoners. International Conference on Machine Learning (ICML 2024).

### **SKILLS**

- Implementation of machine learning and deep learning methods in Python with PyTorch, TensorFlow, and Scikit-Learn for the training, inference, and deployment of AI models in parallel/distributed environments.
- Collection, mining, and visualization of data with NumPy, Pandas, Matplotlib, and SQL/NoSQL databases.
- Use of Linux command-line interfaces and containerized environments (Docker, Apptainer) for high performance GPU computing to accelerate AI training and inference.
- Other skills: Java, JavaScript, HTML, React.js, Flask, R, Jupyter, PHP, Ajax, Socket.io, Git, and REST APIs

### RELEVANT COURSEWORK

Advanced Algorithms, Algorithms for Nonlinear Optimization, Analysis of Algorithms, Applications of Deep Neural Networks, Data Structures and Algorithms, Deep Reinforcement Learning, Differential Equations, Financial Mathematics, High Performance Computer Systems, Introduction to Artificial Intelligence, Introduction to Quantum Computing, Introduction to Data Science, Introduction to Machine Learning, Introduction to Parallel and Concurrent Programming, Large Language Models, Linear Statistical Models, Machine Learning, Matrix Algebra, Nonparametric Function Estimation, Probability, Probability and Statistics for Engineers, Stochastic Processes

### **AWARDS**

Dean's Select Fellowship (2024), Gupta Fellowship (2024), Undergraduate Engineering Valedictorian (2023), Summa Cum Laude (2023), Award for Research Excellence (2023), Antoinette Frances Dames Award for Productive Scholarship in Engineering (2021), Dean's List (2019-2023), National Merit Finalist (2018)