

JOEL WOLFRATH

CURRICULUM VITAE

Personal Information

wolfr046@umn.edu

<https://www.joelwolfrath.com>

EDUCATION

Ph.D., Computer Science, University of Minnesota, 2024

M.S., Statistics, Texas A&M University, 2018

B.S., Computer Science and Mathematics, Wisconsin Lutheran College, 2015

PROFESSIONAL EXPERIENCE

Lead Firmware Engineer

IBM, Rochester MN (2019-2022)

Software Engineer

IBM, Rochester MN (2015-2019)

Adjunct Mathematics Faculty

Rochester Community and Technical College
Rochester MN (2019)

AWARDS

Best Poster Award

ACM/IEEE Symposium on Edge Computing (SEC 2020)

PUBLICATIONS

1. **Joel Wolfrath** and Abhishek Chandra. Efficient Transmission and Reconstruction of Dependent Data Streams via Edge Sampling. Proceedings of the *10th IEEE International Conference on Cloud Engineering (IC2E)*, Pacific Grove, California, USA, Sep 2022.
2. **Joel Wolfrath**, Nikhil Sreekumar, Dhruv Kumar, Yuanli Wang, and Abhishek Chandra. HACCS: Heterogeneity-Aware Clustered Client Selection for Accelerated Federated Learning. Proceedings of the *36th IEEE International Parallel & Distributed Processing Symposium (IPDPS)*, (Virtual), May-June 2022.
3. Dhruv Kumar, **Joel Wolfrath**, Abhishek Chandra and Ramesh Sitaraman. Towards WAN-Aware Join Sampling over Geo-Distributed Data. Proceedings of the *5th International Workshop on Edge Systems, Analytics and Networking (EdgeSys 2022)*, Rennes, France, April 2022.

4. Yuanli Wang, **Joel Wolfrath**, Nikhil Sreekumar, Dhruv Kumar, and Abhishek Chandra. Accelerated Training via Device Similarity in Federated Learning. *Proceedings of the 4th International Workshop on Edge Systems, Analytics and Networking (EdgeSys 2021)*, (Virtual), April 2021.
5. **Joel Wolfrath** and Abhishek Chandra. Data-Aware Edge Sampling for Aggregate Query Approximation. Poster in the *Fifth ACM/IEEE Symposium on Edge Computing (SEC)*, (Virtual), November 2020. **Best Poster Award**.