Chris Egersdoerfer

cegersdo@udel.edu | cegersdoerfer.github.io | Google Scholar | GitHub | LinkedIn

EDUCATION

University of Delaware - Newark, DE | *Ph.D. in Computer Science (Expected Spring 2028)* 2024-Present

University of North Carolina at Charlotte - Charlotte, NC | *B.S. in Computer Science, Summa Cum Laude* 2019-2022

EXPERIENCE

Graduate Research Assistant - University of Delaware 2024-Present

- Built IOAgent, an LLM agent that diagnoses HPC I/O performance bottlenecks from application traces with explanations grounded in research literature (IPDPS ‘25)
- Built STELLAR, a multi-agent closed-loop Lustre tuner that reaches expert-level performance within five attempts (SC ‘25)
- Built CIODI-Bench, 49 expert-curated telemetry analysis tasks over 2+ years of Polaris data, to study reliability bottlenecks in LLM agents (SC ‘26)

Graduate Research Aide - Argonne National Laboratory, Lemont, IL Jun-Aug 2026

- Built a Slurm/Lustre testbed on CloudLab with fault injection across ~30 storage, network, and node-level fault types to evaluate LLM agents for autonomous HPC storage monitoring
- Designed multi-agent monitoring workflows and a grading framework that scores impact detection, root-cause attribution, and incident escalation against injected ground truth

W.J. Cody Associate - Argonne National Laboratory, Lemont, IL Jun-Aug 2025

- Built an evaluation suite of telemetry analysis tasks for LLM agents, derived from analyses in published work
- Built an internal service for ANL staff to ask telemetry questions in natural language; an agent runs SQL and Python workflows over Polaris production data and returns Jupyter notebooks

Graduate Research Assistant - UNC Charlotte 2023-2024

- Applied LLMs and ML classifiers to file system log anomaly detection and I/O interference prediction

Software Developer - Radius Group, New York, NY | *Part-time, Remote* 2022-2024

- Built workforce supply-demand forecasting models for Charlotte employers with a PostgreSQL store and Next.js app

Backend Developer - IBM, Armonk, NY | *Part-time, Remote* 2020-2022

- Built IBM Cloud VMware test automation; refactored an observability platform backend for 3x faster loads

SELECTED PUBLICATIONS (first author)

Understanding Reliability Bottlenecks in LLM Agents for HPC I/O Telemetry Analysis SC ‘26

STELLAR: Storage Tuning Engine Leveraging LLM Autonomous Reasoning for High Performance Parallel File Systems SC ‘25

IOAgent: Democratizing Trustworthy HPC I/O Performance Diagnosis Capability via LLMs IPDPS ‘25

ION: Navigating the HPC I/O Optimization Journey using Large Language Models HotStorage ‘24

AWARDS

Future Leaders of AI Doctoral Consortium - ACM AI Leadership Summit 2026

Computer & Information Sciences Outstanding Graduate Research Assistant - University of Delaware 2025

Winner of the Scalable Storage Competition (SSC24/25) hosted by GWDG (Individual track) 2025

SKILLS

Technical: Python, C, SQL; LLM agents and evaluation; HPC storage and I/O (Lustre, Slurm, Darshan); Linux; Docker