Vineeth Gutta

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TECHNICAL SKILLS

- Languages: Python, Java, React JS, Node JS, C++, Bash, SQL
- Software: Git, Docker, PyTorch, TensorFlow, Scikit-learn, Numpy, Pandas, ONNX, ONNX Runtime, REST, relational databases, NoSQL
- High Performance Computing (HPC) software: Slurm, Singularity, Horovod, PyTorch DDP, RAPIDS AI, DeepSpeed, ROCm, GPU Profiling

EDUCATION

University of Delaware   Newark, DE
Bachelor of Science   June 2019
Major: *Computer Science*
GPA: 3.43

Master of Science/ Doctor of Philosophy   December 2021/ November 2024
Major: *Computer Science*
GPA: 3.95
Relevant Course Work: Algorithm Design & Analysis, Networks, Artificial Intelligence, Deep Learning (DL), Computer Architecture, Bioinformatics, Human Centered AI, Natural Language Processing, Applied Game Theory

EXPERIENCE

PIConGPU Center for Accelerated Application Readiness (CAAR) Project at Oak Ridge Nat. Lab.   June 2023 – Present
Computational Researcher
- Ported plasma-physics DL models to the Frontier exascale system at Oak Ridge National Lab (ORNL)
- Improved scalability and optimization of ML models on AMD MI250X GPUs with the ROCm software stack
- Optimized application by Profiling distributed training workloads using Omnitrace

Pacific Northwest National Lab (PNNL)   Newark, DE
PhD Intern- Scalable Analytics and Decision Optimization group   June 2022 – August 2022
- Worked on a creating a proxy application for scalable Graph Neural Networks (GNNs)
- Created a workflow for sparse, distributed and scalable graphs in distributed memory using Louvain method

Leidos/ National Cancer Institute/ NIH   Newark, DE
Computational Researcher   June 2021 - Present
- Spearheaded efforts to increase portability of DL based drug discovery applications
- Deployed these applications on newer hardware architectures including ARM based A64FX processors
- Extended the capabilities of Flux-scheduler to the cloud to make applications that rely on such a scheduler more widely available to researchers
- Generalized the capabilities of cancer drug discovery DL models by training on tumor-normal tissue data

University of Delaware   Newark, DE
Graduate Teaching Assistant   August 2019 - May 2021
- Assisted in several courses including Data Mining and Software Engineering
- Taught labs for Software Engineering and lead a team of undergrad and graduate TAs
- Incorporated agile methodologies such as code reviews into the curriculum

University of Delaware – Dept. of Computer & Information Sciences   Newark, DE
Instructor   June 2020 - August 2020
- Taught the intro to object-oriented programming course
- Planned, designed, and revised syllabi, curriculum, and instruction content to enhance student learning and experience
- Achieved high ratings based on anonymous student feedback (4.57/5.0)