

# Vineeth Gutta

[vineethg@udel.edu](mailto:vineethg@udel.edu) | Newark, Delaware | LinkedIn: [@vineethgutta](#) | [Website](#)

## 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

*Bachelor of Science*

Major: *Computer Science*

GPA: 3.43

Relevant Course Work: Data Mining, Machine Learning, Secure Software Design, Web App Security, Embedded Systems, Computer Vision, Applied Cryptography

Newark, DE

June 2019

*Master of Science/ Doctor of Philosophy*

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

December 2021/ November 2024

## EXPERIENCE

### PIConGPU Center for Accelerated Application Readiness (CAAR)

*Computational Researcher*

June 2023 – Present

- 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

### Pacific Northwest National Lab (PNNL)

*PhD Intern- Scalable Analytics and Decision Optimization group*

Newark, DE

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

*Computational Researcher*

Newark, DE

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

*Graduate Teaching Assistant*

Newark, DE

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

*Instructor*

Newark, DE

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)