

Huiyu Xie

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EXPERIENCES

The Julia Programming Language

Mar. 2023 to Present

TrixiCUDA.jl - Lead Developer

github.com/trixi-gpu/TrixiCUDA.jl

Develop GPU acceleration support for solving hyperbolic partial differential equations (PDEs), with a current focus on the semidiscretization of the solvers.

Trixi.jl - Active Maintainer

github.com/trixi-framework/Trixi.jl

Enhance numerical support by ensuring type stability for meshes, solvers, and callbacks during the simulation of hyperbolic partial differential equations (PDEs).

Google Summer of Code - Open Source Contributor

May 2023 to Aug. 2023

summerofcode.withgoogle.com/huiyuxie
julia.gsoc2023.project/huiyuxie
trixi-framework.github.io/gsoc/2023

Provided GPU support for Trixi (a high-order numerical simulation framework for hyperbolic PDEs) to accelerate the semidiscretization of hyperbolic PDE solvers, focusing on the Discontinuous Galerkin Collocation Spectral Element Method with tree mesh.

Bank of Hawai'i

May 2024 to Aug. 2024

Strategic Analyst

boh.com/business/checking-and-savings

Cleaned raw customer transaction and profile data, trained and tuned classification models, including logistic regression, decision tree, and XGBoost, to predict the customer group with a high probability of transferring accounts from checking-only to savings.

NVIDIA RAPIDS

Oct. 2023 to Dec. 2023

Open Source Developer

github.com/rapidsai/cugraph/pull/huiyuxie

Enhanced the Dataset API of cuGraph (a GPU-accelerated graph analytics library) by adding support for edgelist downloading and graph formation across multiple GPUs.

Shenzhen Research Institute of Big Data

June 2020 to May 2022

Student Researcher

sribd.cn/en/article/smartcampus

Leveraged Shannon Entropy, Approximate Entropy, Sample Entropy, and a Lempel-Ziv-based Entropy Estimator on the student trajectory data, improving the correlation between student trajectory and academic performance and creating entropy-based features for predicting student performance.

EDUCATION

Santa Clara University, School of Engineering

Sep. 2022 to June 2024

Master of Computer Science

The Chinese University of Hong Kong, School of Data Science

Sep. 2018 to May 2022

Bachelor of Mathematics and Statistics

SELECTED AWARDS

CUHK School of Data Science Dean's List

Sep. 2020

SKILLS

Programming Languages: Proficient in Python/C++/Java/SQL/R/MATLAB/Julia; Familiar with C/C#/JavaScript; **Cloud Computing:** AWS; **Distributed/Parallel:** CUDA/Open MPI/OpenMP/Spark; **Tools & Libraries:** NumPy, pandas, SciPy, scikit-learn, Matplotlib, XGBoost, Dask, RAPIDS