Zhang Jinrui

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Education

Jilin University, Jilin, Changchun   Expected Graduation: 2026
B.Sc. in Mathematics
Relevant Coursework: Real Analysis, Abstract Algebra, Optimal Control, Nonlinear Optimization

Research Interests

Machine Learning, Nonlinear Optimization, Geometric Deep Learning

Research Experience

Arbitrary-precision integer arithmetic   March 2023 – June 2023
Supervised by Prof. Zhou Mingjun, Jilin University
By using NTT(Number Theory Transformation) and FFT(Fast Fourier Transformation), I implemented
a Arbitrary long integer multiplication algorithm in C++[1].
Differential Informed Auto-Encoder   September 2023 – December 2024
By doing regression and Machine Learning on the phase space of the collected dataset to find the inner
Differential equation dependencies.[2]

Technical Skills

Programming: C/C++, Python, MATLAB, LaTeX, CudaC++
Engineering Software: CMake, git, Android Studio
Other: Algorithm Development, Data Analysis, Machine Learning, Software Engineering

Publications and Presentations

Differential Informed Auto-Encoder — arXiv:2410.18593

References

[1] Zhang Jinrui. Ntt fast polynomial multiplication. `https://github.com/unjerry/firstattempt`.
    Accessed: 2024-10-21.

[2] Jinrui Zhang. Differential informed auto-encoder, 2024.