

Zhang Jinrui

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GitHub: unjerry

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.

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.