TIANTONG SUN

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Wuhan City, Hubei Province

birth:2004.10.25, age:20

EDUCATION

Huazhong University of Science and Technology 'Project 985'　　　　　2021.9-Present
Major :the School of Mathematics and Statistics(Strong foundation plan for basic disciplines)
Degree :Senior Currently
rank:1/20, Overall Score: 89.5/100, GPA:4.4/5 or 3.85/4
Courses with Distinction: Topology(100), Mathematical Statistics(98), Abstract Algebra(97), Differential Geometry(100)

National University Entrance Examinations: **rank:632/147111 , Overall Score: 671(maximum score:750)**

EXPERIENCE

American Collegiate Mathematical Modeling Contest: F award(top 1.78%)　　　February 2024
Responsible for Searching, Mathematics modelling and Writing.
· Model by establishing differential equations of the population growth of lampreys, including "Eco-Adaptive Model for Lampreys on Sex Variation", and "Dynamic System for Multi-Interaction of Ecosystem"
· Analysis "Effect of the Alterable Sex Ratio on the Larger Environment" on the basis of our model.

Trade-offs between fairness and utility based on the Federated LLM (in progress) *Jan.2024-Now*
· Under the framework of Federated LLM, we provide optimization objectives and constraints for the trade-off between fairness and utility, and propose a Federated algorithm that relies on fairness indicators, effectively making up for the shortcomings of Federated LLM fairness research.(Going to be finished and submitted.)
· Currently research on the upper and lower bounds of parameter errors mathematically in federated learning.

Studying and contributing for "Lean-Prover" open source code library of Peking University AI-for-Math Summer Program　　　　　　　　　　　　　　　　　*June.2023-Sep.2023*
· After study, I am able to write the lean language version of proof of some mathematical theorems.
· **An internship:**And provide simple implementations to improve accuracy for AI math-problem-solving company (a company called Answer.AI).

Participated in and lectured the differential manifold seminar　　　　*June.2023-Nov.2023*

AWARDS AND SCHOLARSHIPS

National Scholarship　　　　　　　　　　　　　　　　　　　　　　　*2022*

Outstanding Undergraduate Student　　　　　　　　　　　　　　　　*2022*
Issued by my university, only 1% is selected and equipped with personalized training programs.

American Collegiate Mathematical Modeling Contest: F award(top 1.78%)　　*February 2024*
School merit student scholarship　　　　　　　　　　　　　　　　　　*2022*
The second prize of the 15th National Mathematics Competition for College Students　*2023*
Excellent individual of Winter Vacation "Return home" social practice for college students.
Nov.2022
As an organizer, I returned to my high school for college admissions promotion.

"Midas Touch" Startup School's graduation certificate　　　　　　　　　*2023*