DI HOU

(86)18883522012 ⋄ dihoumath@gmail.com

EDUCATION AND ACADEMIC PERFORMANCE

Jilin University(JLU)   *Sep 2018 - Present*

- B.S in Mathematics
  Tang Aoqing Honors Program in Mathematics(TAQ - Math)
  Branch of EVEREST Project: National Undergraduate Programs in Science

- Overall GPA: **3.97**/4 or **95.50**/100

- Ranking: **1**/117 in the Information and Computing Science Major

Peking University(PKU)   *Jul 2020 - Jul 2020*

- Undergraduate Summer School: Computational and Applied Mathematics

Fudan University(FDU)   *Jul 2020 - Jul 2020*

- Graduate Summer School: Application and innovation of data science

Standard Test

- TOEFL IBT:**102**(Reading 28, Listening 26, Speaking 24, Writing 24)

RESEARCH EXPERIENCE

Research: Deep Full Connected Neural Networks for solving American put option under the Black-Scholes model   January 2020 - Present
National undergraduate innovation and entrepreneurship training program | Advisor:Prof.Haiming Song

· Summarized current NN methods to solve PDEs
· designed an efficient and stable algorithm for PDEs of American options pricing in high dimensional data
· compared with binomial method as a benchmark to check the efficiency and accuracy.

The paper is going to be published.

Constitutive data fitting with Nonlinear Least-Squares Method   June 2020 - Sep 2020
National Center for Applied Mathematics | Advisor:Prof.Ran Zhang and Tao Tang

· Learned the finite element method(FEM) for the analysis of data model
· Designed optimization algorithm and write codes to fit constitutive model
· Created a database to store the stress strain data

Medical image recognition of Moyamoya disease   Dec 2019 - May 2020
Department of Computer Science, Jilin University | Advisor:Prof.Fengfeng Zhou

· Preprocessed the medical images and classify the images of patients
· Designed transfer learning model and compared to traditional machine learning algorithm

HONORS AND AWARDS

- Scholarship of Tang Aoqing Honors Program of Research&Practice,Jilin University   2020

- The Mathematical Contest in Modeling,**Honorable Mention**   2020

- The Chinese Mathematics Competitions, **First Prize** 2019

- The Mathematical Contest in Modeling in China, **First Prize** 2019

- National Scholarship(**TOP 0.2%** in China), Ministry of Education of China 2019

- Outstanding Student(**TOP 4%**), Jilin University 2019

STATEMENT OF PURPOSE

I'm a junior undergraduate student in the Department of Mathematics at Jilin University, majored in Information and Computing Science. I am particularly interested in **operation research**(especially optimization). I also have passion for cross-disciplinary research in terms of numerical computation, machine learning, statistics and their applications. Recently I am combining neural network and option pricing to gain an efficient and stable algorithm.