

HONGYAO ZHU

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EDUCATION BACKGROUND

Cornell University, Weill Cornell Medicine, M.S. in Biostatistics & Data Science 2019.8 - 2020.8

Courses: Data Science, Regression Analysis, AI in Medicine, Study Design.

Nanjing University, Kuang Yaming Honors School, B.S. in Chemistry 2015.9 - 2019.6

GPA:4.474/5 Rank 14/86, People's Scholarship, Liao Shi Scholarship, Excellent Student Scholarship (Top 20%), Certificate of Kuang Yaming Honors Program, Excellent Student Award in 2016-2017, Nanjing University Excellent Social Practice Student in 2016. **Vice President** of the Kuang Yaming Honors School Student Union.

Duke University, exchange student, GPA:3.855/4 2017.8 - 2017.12

SKILLS

- **Programming Language:** C, C++, MATLAB, R, Python, Java, Git, Spark in R.
- **Office Software:** Microsoft Office, Adobe Creative Cloud.
- **Key Words:** Self-learning, Communication, Strategic, Organizing, Maximizer, Archeiver.

RELATED PROJECTS

The First-Principles Calculations of Graphene Oxide Nanosheets 2018.12-Present

- Established nine types of water-containing GO nanosheet models and a total of 19 different supercells.
- Wrote R program to apply external stress along c-axis of GO nanosheets.
- Analysed over 1TB data from first-principles calculation to get the optimized structure and piezoelectricity behavior of water-containing GO nanosheet models.

Simulation of the Success Rate of Photon State-Channel Network 2018.9-2019.4

- Investigated the routing optimization problem for Photon Network, proposed the algorithm that effectively achieves high success rate with low deposit lockup.

Realization of Interest Rate Swap on Blockchain 2017.12-2018.10

- As teamleader, wrote a blockchain program and applied Java to complete atomic interest rate swap transactions on the Corda platform.
- Wrote a risk analysis program, built a risk exposure model retrofitted to the blockchain based on the original margin period of risk (MPOR) risk exposure model, utilized the open source risk engine (ORE) software to do MC simulation and wrote Java program to complete the model calculation.

WORK EXPERIENCE

Huatai Securities, Suzhou Branch | Retail Business Dept., Data Analyst Intern 2018.9-2018.11

- Client Portrait Analysis: based on over 60,000 sets of client data, used R language to calculate the proportion of valid clients in terms of age, gender, occupation and education.
- Client Validity Modeling: screened out 20+ variables and modeled with Naive Bayes Classifier to judge the validity of customers, with the success rate of 70%-75%.

CCB Life Insurance Co., Ltd | Bank Insurance Dept., Data Analyst Intern 2018.7-2018.8

- Composed daily and monthly sales performance reports with Excel; Developed proficiency in the applications of statistical functions and macros of Excel.
- Created a program for the Employee Care Plan which automatically screens out the birthday person.

PUBLICATION

- **Ready to submit** "The First-Principles Calculations of Piezoelectric Properties of Two-Packed Graphene Oxide Nanosheets with Different Confined Water Layers"
- **Submitted** "Routing Optimization for High Speed Photon State-Channel Architecture" to China Communications.
- **Published** "Blockchain-based Implementation of Smart Contract and Risk Management for Interest Rate Swap" on CCF CBC (China Blockchain Conference) 2018.