

TUORUI PENG

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Education

Department of Physics, Tsinghua University

Sep. 2019 – July 2023

Bachelor of Science in Physics (3.77/4.0), with Statistics Minor (3.95/4.0)

Beijing

Relevant Coursework

- | | | |
|---------------------------------|-------------------------------|--------------------------------|
| • Probability (P) | • Statistical Computing (4.0) | • Statistical Learning (P) |
| • Statistical Inference (4.0) | • Intro to Data Science (3.6) | • Intro to Biostatistics (4.0) |
| • Multivariate Statistics (4.0) | • Time Series Analysis (4.0) | • Stochastic Process |
| • Regression Analysis (4.0) | • Survival Analysis (4.0) | • Intro to Causal Inference |

Experiences

Department of Statistics and Data Science, NUS

June 2022 – Sept. 2022

Research Assistant

Beijing

- Studied landscape modification in Simulated Annealing, especially on discrete Hamiltonian, to speed up sampling and optimization process;
- Focused on applicability of spin glass model and replica symmetric theory in landscape modification.

Center for Statistical Science, Tsinghua Univ.

Dec. 2021 – July 2022

Research Assistant

Beijing

- Crawled and parsed case-report articles on PubMed to form the PubMed-Center-Patient large-scale dataset of Electronic Medical Record;
- Used PMC-Patient as seed dataset to fine-tune language model for crawling the whole PubMed OA;
- Mapped the citation graph as patients link as database for retrieval system;
- Crawled and parsed medical entity relations from public medical websites to form knowledge graph.

Department of Physics, Tsinghua Univ.

Jan. 2021 – Nov. 2021

Student Research Training

Beijing

- Studied on heterogenous junction between metal electrode and low-dimensional semiconductor MoS₂ to explore the characteristic and production technique;
- Different processing methods and technologies were experimented to develop a better way, obtaining heterogenous junction with more stable and ideal performance;
- Further explored the usage of low-dimensional materials in ionic micro-device.

Open Source Project

Statistics Course Summary Note | \LaTeX , R

Sept. 2020 – Present

- Recorded statistics knowledge and useful links in a well-organized \LaTeX PDF note;
- Shared online at <https://v1ncent19.github.io/SummaryNotes> to benefit students around me. Also used as supplementary materials at student colloquiums of physics labs.

Honors & Rewards

Honorable Mention, Mathematical Contest in Modeling (2022)

Scholarship for Academic Advance (2020)

Skills

Programming: R, Python, C, \LaTeX , Mathematica

Languages: English (fluent, *with ielts 7.0*), Chinese (native)