Yipu Liao

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Education

TAQ Honors Program in Physics

College of **Physics**, Jilin university

2699 Qianjin Street, Changchun, JL 130013, China

GPA: 3.88/4.00

Rank: 5/280

TOEFL: 91 (Reading 29, Listening 20, Speaking 20, Writing 22)

Extracurricular Experience

➢ **CAS Program in High Energy Physics, IHEP (Beijing)**

Oct. 2020 ~ Present

- This research is proposed to improve digital the software running speed of CGEM-IT detector by using machine learning.
  - *Generated one dimension and three dimensions sampling results by using Generative Adversarial Networks (GAN) , DCGAN and Wasserstein GAN;*
  - *Generating sampling results controlled by drift distance by using Conditional GAN(CGAN);*
  - *Learned about the track detector related knowledge.*

➢ **Undergraduate Research,** with Prof. Weimin Song

Center of Theoretical Physics; Jilin University; Changchun, China

Jun. 2019 ~ Present

  - *Analyzed data from BESIII (the detector of Beijing Electron Positron Collider);*
  - *Researching on width measurement of D^*_0 meson;*
  - *Learned software structures of CEPC and jets of b quark(b-tagging).*

➢ **CIS-University Pilot PBL Research Program,** with Prof. Gunther Roland

Jan. 2021 ~ Mar. 2021

  - *Studied on the optimal truncation percentage of measuring dE/dx, and used machine learning (MLP and BDT) optimizing the calculation, which had been found better performance.*

- Researched on electron identification with detectors information like HCAL, ECAL and TPC.

➢ BESIII Winter school Program 2020

17 Jan. 2020 ~ 19 Jan. 2020

- Got an all-around training about BESIII, from physics background, software platform to analysis technique.

➢ IHEP School of Computing 2020

24 Aug. 2020 ~ 25 Aug. 2020

- Got training about high energy physics computing, including machine learning, GPU parallel computing, offline data processing and data management etc.

➢ Jilin University-Oxford University Short-term Exchange project on Physics 2020

25 Oct. 2019 ~ 1 Nov. 2019

- Studied at St Peter's College, Oxford to get academic training on Physics and Chemistry.

Honors and Awards

➢ Scholarship
- *Outstanding Student, Jilin University, 2018-2019*
- *Outstanding Student, Jilin University, 2019-2020*
- *National scholarship, 2018-2020*
- *National scholarship, 2019-2020*
- *Dean's scholarship, College of Physics, Jun. 2020*

➢ Awards
- **National First Prize** *in China Undergraduate Mathematical Contest in Modeling (CUMCM), Aug. 2020*
- **Finalist Prize** *in Mathematical Contest in Modeling and Interdisciplinary Contest in Modeling (MCM/ICM), Feb. 2020*

Other Skills

- Python language
- C++ language
- Linux bash language
- CERN ROOT (Analysis Framework using in High Energy Physics)
- Basic experimental skills in Physics