



Yu Sizhuo

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Beijing, Haidian District | Graduation:03.2021



EDUCATION

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- Master, Beihang University** Sep 2018 – Mar 2021
System Engineering Sino-French Engineering school & Department of Physics
CentraleSupélec Jan 2019 – Jun 2019
Exchange program
- Achieved above A grades with all courses during the exchange.
- Bachelor, Beihang University** Sep 2014 – Jun 2018
Applied Physics Sino-French Engineering school
- Graduated with the honor of "outstanding graduate of Beihang university"

INTERNSHIP EXPERIENCE

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- Quantum Computing's industrial application** Jun 2020 – Dec 2020
EDF (Électricité de France) China R&D center, digital innovation team Beijing
- Exploring and testing the application of **Adiabatic Quantum Computing** in the energy industry.
 - Development of an algorithm to **solve complex constrained optimization problems** with Quantum Annealing on D-wave's system, the main focus of this work is **mathematical problem reformulation** and **python coding**.
 - Investigation and writing of a 24-page individual report** on the Chinese eco-system of Quantum Information Science.
 - Coaching the tutorial of Adiabatic Quantum Computing** with D-wave ocean library during EDF's **Quantum Coding Week event**, which is participated by the US, France, and UK R&D center.
- Drilling data structure analysis** Jul 2019 – Oct 2019
Schlumberger Beijing Geoscience Center, DDCE team Beijing
- Analysis of the **data structure of drill logs**
 - Design of a **similarity metric** between drill logs based on **Multi-Dimensional Sequence Alignment** and **Genetic Algorithms**.
 - Won the **first prize** of the company's **machine learning coding league** during the internship.

PROJECT EXPERIENCE

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- Quantum Spin Materials Genome Project** Oct 2019
Correlated Quantum Matter and Materials Group, Beihang Univ. Beijing
- Development of a new methodology for finding parameters in quantum spin models based on **Bayesian optimization** and **auto differentiation**, which provides efficiency boost and extra information comparing to classical methods.
- Development of Attitude Determination and Control System for CubeSat (mini-satellites)** Feb 2019 – Jun 2019
CentraleSupélec Student Space Center, ADCS team Paris
- The project is a joint of Thales Alenia, the biggest satellite manufacturer in Europe, and the Student Space Center of CentraleSupélec, it aims at launching multiple mini-satellites on various space exploration projects.
 - As a member of the ADCS group, I'm in charge of the overall **modeling of the perturbation** on multiple trajectories, specific calculation of gravity gradient force and magnetic perturbation, and writing of documents.
- Silicon band structure calculation** Oct 2017 – May 2018
Group Leader, GW Calculation of Electronic Structure Group at Centrale Pékin
- Calculation and analysis of the energy band structure** of various Silicon Crystal with doping
 - As the group leader, I'm in charge of aiding the professor to organize the research project.
 - Responsible for **data processing** and **writing of interface program & calculation script under Linux**

STUDENT ACTIVITIES EXPERIENCE

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- Exchange visit in Ecole Centrale de Casablanca, Morocco May 2018 – Jun 2018
Captain of College Football Team Sep 2016 – Sep 2017
Vice-president of Department of Sport of Students' Association Jun 2015 – Jun 2016
University debate team Oct 2014 – Sep 2016

SKILLS and INTERESTS

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- Skills:** Algorithm Development, System Modeling, Machine Learning, photo and video editing
 - Languages:** English (CET-6), French (DALF-C1), Japanese (oral communication)
 - Computer Languages** Skilled: Python, Matlab | Having relevant project experience: C, C ++, R
 - Interests:** football, debate, Go, photography, drum kits