Qian Zhang

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To be an excellent engineer!

Education Background

University of Science and Technology Beijing. Aug 2018 - Jun 2022
Will be awarded the bachelor's degree of Engineering in Metallurgy Engineering. GPA: 3.55 / 4.00 IELTS: 7.0

Major courses: Physical Chemistry of Process Metallurgy, Metallography,Mechanics of Materials, Principles of Transfer in Metallurgy, Metallurgy of Iron and Steel.

Competition Experiences

Team Leader, National Student Metallurgical Science and Technology Competition May 2021 - Jul 2021

- Conducted research on a new method to improve the quality of high-Mn steel.
- Used Ce as the inoculant that add to steel liquid before the casting process. The grain size of such steel decreased compare to the one that without adding Ce.
- Mechanism of the grain size confining is that, the tendency of Ce element to react with non-metal elements like O and S contribute to the formation of Ce2O3, CeS, and so on. Reaction products aforementioned act both as substrate for heterogeneous nucleation and for pinning the grain boundary of High-Mn steel.
- Wrote the conclusion report and won the third prize at the nation level.

Team member of Yao Lan Cup hosted by USTB Apr 2021 - Jun 2021

- Applying several third-party libraries of Python, like bs4, pandas, numpy, selenium and so on, to gather information from metallurgy related website, which support other part of our project.
- Building the framework of intelligent chatting robot using the go-cqhttp library, and deploy it in the social media App QQ.
- Combing the previous two parts together. Realize the function that entering certain key words in QQ chat box and return related information selected from what we gathered beforehand.
- Wrote the conclusion report and won the third prize at the school level.

Research Experiences

Team member of Students Research & Training Program Jun 2021

- Inspired by researches in agronomy, that is, judge the quality of cereals from the sound that made by impacting the detect plate.
- Designed an experiment to find the relationship between compacting sound made by sintering ore and the quality of that.
- Adopted a sound detector to collect sound signal of sintering ore falling on the steel plate. And use MATLAB GUI to transform the time domain diagram into spectrum map.
- Extract amplitude, frequency, power spectral density, phase angle value from the acoustical signal aforementioned. After applying PCA to decrease the dimension of raw data, feed them into BP neural network.

The whole system works well theoretically and it has not been tested in large scale production.

Skills & Award

- **Skills:** Python (intermediate),LAMMPS (elementary), Material Studio (elementary), MATLAB (elementary), EPL(elementary), Origin (elementary), Linux(elementary), Arduino(elementary)
- **Award:** CCNA(Cisco certified Network Associate), National Student Metallurgical Science and Technology Competition (Third Prize, Team of Undergraduates), University of Science and Technology Beijing (Freshmen Scholarship), University of Science and Technology Beijing (Ren Min Scholarship), MTA: Introduction to Programming Using Python, MTA: Networking Fundamentals. 2018 Social practice silver award team of USTB (support education)
- **Interests:** Languages Learning (Japanese: JLPT N5, German)