Dr. Sichen Li

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More Info on Personal website: https://season0112.github.io/

SUMMARY: Experienced Data Scientist in the Netherlands, skilled in machine learning and statistical models. Proven track record solving complex data challenges and providing solutions. Available ASAP.

SKILLS

Python, C++, MySQL, Git, Linux, Bash Shell, Azure Cloud, Cluster Server, Jira, Data visualization (Matplotlib, Seaborn, Tableau), **Machine Learning**(Scipy, Scikitlearn, Tensorflow), **Statistical Modeling**, **Data Cleaning and Processing**

EDUCATION

2017.11–2023.07
- **Doctorate in Physics**

RWTH Aachen University, Aachen, Germany / European Organization for Nuclear Research, Geneva, Switzerland

09/2015-07/2017
- **Master of Science in Physics**

Harbin Institute of Technology, Harbin, China

09/2011-07/2015
- **Bachelor of Science in Physics**

Harbin Institute of Technology, Harbin, China

WORK EXPERIENCE

11/2017-07/2023 **Data Scientist, RWTH Aachen University, Aachen, Germany**

- **Cosmic Ray identification with Machine Learning**
  - Train the classifier with machine learning algorithms (**BDTs, Neural Networks**, etc) on Comic Monte Carlo simulation data
  - Hyperparameter Optimisation for performance with Grid/Random Search
  - Apply the classifier to real collected data from the International Space Station, showcase a significant **20%** improvement in performance compared to previous classifiers
- **Analysis of Solar Wind impact on Cosmic Rays**
  - Data Cleaning and Reduction for over **200 billion** cosmic events collected from the International Space Station
  - Apply advanced **statistical models**, including likelihood template fit techniques to extract antiproton signals from the collected data
  - Parameter estimation and confidence level to constrain Dark Matter models
  - Time series analysis of obtained cosmic antiprotons, identify distinct patterns in the propagation of cosmic antiprotons within the solar system for first time

11/2017-10/2022 **Scientific Researcher, European Organization for Nuclear Research, Geneva, Switzerland**

- **Raw Cosmic Ray data calibration**
  - Investigate space operation during data taking to understanding Raw Data Quality
  - Execute precise calibration procedures on raw cosmic ray data to ensure accurate measurements
  - Achieve a remarkable reduction in measurement uncertainty of the physics response, reaching within **5%**
- **Detector in Space Monitoring**
  - AMS-02 is a cosmic ray detector on the International Space Station that operates **24/7** to collect cosmic ray data. My task involves monitoring detectors running in space based on **Grafana** and performing daily high voltage adjustment to optimize detector performance.

09/2016-07/2017 **Teaching Assistant, Harbin Institute of Technology, Harbin, China**

- Support the supervisor in the lecture on 'Thermodynamics and Statistical Physics' by grading assignments and providing clarification during exercise sessions.

LANGUAGE

English(Professional Proficiency), Chinese(Native Speaker), German(Beginner)