IAF SPACE EXPLORATION SYMPOSIUM (A3)
Interactive Presentations - IAF SPACE EXPLORATION SYMPOSIUM (IP)

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OBSERVATION OF TEACHING PRACTICES IN A SPACE COURSE TRAINING PROGRAM SPONSORED BY EUROSPACEHUB ACADEMY AND VGCC

Abstract

VGCC, which stands for Vision Gifted Chinese Children, is a STEM-focused education and training institute. Our vision and goal are to provide an excellent and high-end academic platform for STEM education, to nurture Chinese youth, ignite the passion and unlock the potential of Chinese students, and empower them to dream of changing the world.

In the space project supported by Euro Space Hub, Prof. Bernard Foing and Ms. Fatemah Fazel were invited to provide specialized training and practical programs for three talented high-school students in Astronomy, Astrophysics, and Space Engineering. Through twenty-two hours of online sessions and thirty hours of in-person teaching programs, students gained a basic understanding of astronomy and mastered how to use DS9 and Python for machine learning and data analysis, extracting valuable information from open-source data libraries.

During practical sessions, students constructed a solar system model, a CubeSat model, and designed a prototype of a Moon Base through brainstorming. They also wrote Python codes to conduct various mathematical simulations, such as linear regression and random forest regression, to transform astronomical data into images, graphs, and other displayable results.

As a teaching assistant, Dr Anna Guan has been involved in this program from its inception. She will provide more details in the teaching syllabus, student learning outcomes, and evaluate teaching performance. These first-hand results will be invaluable in designing training programs for your students, enhancing public understanding of space, and cultivating more potential experts in space science and engineering.