LUCAS EINIG

PHD student in Astrophysics and machine learning

PERSONNAL PROFILE

I'm a PhD student with a passion for mathematics and physics. Outside of work, my passion has been basketball for 17 years, in which I am involved in coaching young players.

LANGUAGES

French (native)
English (C1 level)
Spanish (B1 level)

CONTACT

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Email: einig@iram.fr

EDUCATION

PHD degree in Astrophysics and Diluted Environments

Grenoble Alpes University, Institut de Radioastronomie Millimétrique (IRAM) (Grenoble, France), 2021 - Aujourd'hui

Development of learning algorithms for statistical analysis of the interstellar medium using the Orion B molecular cloud as an example.

Master Signal and ImaGe processing Methods and Applications

Grenoble Alpes University (Grenoble, France), 2019 - 2021

Research-oriented training. Scientific writing, Bayesian inference, optimization, model inversion and modeling of physical phenomena.

Engineering degree in Signal Processing and Data Science

Grenoble INP - Phelma (Grenoble, France), 2018 - 2021

Modeling of the generation and acquisition chain of physical processes, statistical learning, information processing and transmission.

Preparatory classes en maths, physics and computer science

La Martinière Monplaisir high school (Lyon 8, France), 2016 - 2018

WORK EXPERIENCE

Final year project at GIPSA-lab laboratory

Grenoble (France), 2021

Application of machine learning methods to astrophysical hyperspectral data. Automatic denoising and information extraction from spectral lines of varying signal-to-noise ratio.

Three months internship at CRITIAS laboratory

École de Technologie Supérieure (Montréal Canada), 2020

Development of a cross-platform mobile app for the detection and prevention of hearing loss among music students.

Mentoring at the Grenoble IUT2 in maths and physics

Grenoble Alpes University (Grenoble, France), 2021

Private tuition for middle school to college students

Grenoble (France), 2016 - 2018

DOMAINES DE COMPÉTENCES

- Maths and theoretical physics
- Programming in Python, Bash, MATLAB, C, C++, Java, Dart
- Artificial neural network design with PyTorch
- Cross-platform mobile apps development with Flutter
- Database management (SQL, PostgreSQL, graphQL)
- Writing documents with LaTeX