

TETAUD SEBASTIEN

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Paris, France

EXPERIENCE

Data Engineer for Earth Observation

CNRS, Polytechnique, Laboratoire de Météorologie Dynamique

November 2018 - 1 year contract Paris, France

- Implementation of pipelines that ingest huge volumes of data from different geostationary satellites.
- Build and maintain pipeline systems for real-time geospatial data analyses to predict and support balloons trajectory for Straetol2 campaign.
- Automatic production of this work flow of data analysis.
- Detect, fix and improve existing pipelines of geospatial data analyses.
- Track, review, corrective maintenance, test, and validation with GitLab.

Junior Physics Engineer/ GUI-data engineer

CERN, European Organization for Nuclear Research

February 2018 - November 2018 Geneva, Switzerland

- Study vacuum compatibility and outgassing of polymers in the LHC by building a custom ultra high vacuum test bench.
- Developing a graphic user interface in Python for automatized post-processing, data analysis and dynamic data visualization in Python for different types of instruments.
- Implement this GUI to the vacuum acceptance test lab to standardize test.
- Coordinate vacuum acceptance test for ELENA decelerator antimatter experiments.

Master Thesis (Data Analyst Engineer for space environment)

ESA, European Space Agency, The Payload Technology Validation section

March 2017 - September 2017 Noordwijk, The Netherlands

- Impact of gamma rays on infrared detector for The Astronomy Large Format Array Activity, Ariel mission.
- Perform detector characterization pre and post-irradiation at cryogenic temperature and measure the annealing effect.
- Develop a user friendly pipeline of data analysis in Python for automatized post-processing, data analysis and images processing.

Undergraduate Internship (Applied Plasma Physics)

Lawrence Berkeley National Laboratory, Plasma Applications Groups

April 2016 - Aug 2016 California, USA

Non-Evaporable Getter film coatings for next generation particle accelerator. Optimization of a getter thin film of TiZrV inside a copper tube by plasma sputtering deposition process by building a dedicated experiment.

Undergraduate Internship (Astrophysics laboratory)

Physikalische Institut at Westfälische Wilhelms-Universität

March 2014 - May 2014 Münster, Germany

Hydrogen desorption from Graphite: Study the interaction between hydrogen and graphite with a laser as an idealized system to explore the mechanisms of the hydrogen conversion in the interstellar medium.

EDUCATION

MSc Aerospace Engineering, Data Science, System Engineering

Paris-Sud 11 University/Observatoire de Paris

2018 France

BSc of Physics

Paris-Sud University 11

2016 France

COMPUTER SKILLS



Programming

Python, Bash, Cylc, Jinja2, C#, C, Matlab, Gitlab, MkDocs, Latex



Python Library

Numpy, Pandas, NetCDF, Hdf, Astropy, re, BeautifulSoup, Basemap, Bokeh, Seaborn, Plotly, Matplotlib, Sklearn, Tensorflow, PyQt5



Os skills/IDE

Unix-Linux, Windows/ Anaconda, PyCharm, Visual Studio, Eclipse

LANGUAGES

French

English

German



STRENGTH

Python

Geospatial data

Data analysis

Dynamic data visualization

Astronomical instrumentation

Space environment

Handy

Team spirit

Autonomous

Communication

INTERESTS

French Air Army Reservist, street workout, travel, machine learning, New space, CubeSat.

REFERENCE

Pierre-Elie Crouzet, ESA, The Netherlands

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Christina Yin Vallgren, CERN

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Andre Anders, LBNL, Berkeley Lab

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PERSONAL PROJECTS

- Web scraping for Cubsat market analysis
- Learn TensorFlow/SQL
- Project Birdy, Dynamic control of a CubeSat Attitude and Orbit Control System: Setting of functional tests for Attitude and Orbit Control System.