

# SEBASTIEN TETAUD

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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 Astronomical Instrumentation, Computer Science

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, Cartopy, Bokeh, Seaborn, Plotly, Matplotlib, Sklearn, Tensorflow, PyQt5, os, glob, sys



### Os skills/IDE

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

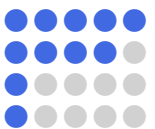
## LANGUAGES

French

English

Korean

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.