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#### Languages

Dutch,  
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# Joshiwa van Marrewijk

Find me on: <https://home.strw.leidenuniv.nl/~marrewijk/>

## About me

I feel privileged that I enjoy what I study, Astronomy is my passion. My study enables me to combine my hobbies, like programming, with abstract complex concepts such as The Origins and Evolution of the Universe. In my free time I read books, play (but mostly listen to) music, or go surfing. I would not call myself a perfectionist, however I am easily motivated to fully commit myself to new projects. In life, I consider myself to be enthusiastic, driven, and I am always in for a lively discussion.

## Education

### 2019-Spring 2021, Leiden University (Observatory)

Msc in Astronomy (Research)

### 2015 - 2019, Leiden University

Bsc in Physics and Bsc in Astronomy

### 2009 - 2015, Het lyceum Vos (High School)

Socrates- and IB degree at VWO (NT & NG)

## Research Experience

### 2019, Leiden Observatory - Bsc Thesis

Marrewijk, J. v. (2019). *Variable illumination in the PDS 66 protoplanetary disk (Bachelor's thesis)*, supervisors: M. Kenworthy, S. Wolff.

### 2019-2020, Leiden Observatory - Msc Thesis (In prep.)

Marrewijk, J. v. (2020)., *A needle in a Haystack: Finding weak molecular lines with the use of matched-filtering techniques (Master Thesis)*, supervisors: M. Rybak, J. Hodge.

### 2019-2021, Leiden Observatory - Courses

Bsc Thesis: 8.5, Current Master G.P.A. 8.4

## Other Experiences

### 2017 - Present, PR-Assistant Astronomy, Leiden University

I was held responsible for the quality and interaction between the University and lower education systems, and I operated as a mentor for High School students who were writing their thesis in Astronomy.

### 2016 - 2017, Pr-team Sterrenkunde, Leiden University

### 2016 -2017, Tourguide, Old Observatory, Leiden

### 2013 - 2016, Counter chef, Cum Loude Events BV, Zwijndrecht

I organized the finance and provision of a bar, and coordinated other personal.

# Skills

## Global skills

### Data Analysing

By computing huge astrophysical data sets I learned how to visualize, interpret, and understand large blocks of data and make it accessible to others.

### Problem Solving

As most of Physics and Astronomy is math, I learned how to be a pragmatic problem solver by analysing and understanding obstacles and solve them with an ordered/systematic or creative approach.

## Specific skills

### Programming

- Numpy Broadcasting
- Tensorflow
- Data Mining
- Data Visualisation with Seaborn and Matplotlib
- Deep Learning
- Filtering large Data sets.

### Math

- Mathematical Analysis
- Linear Algebra
- Tensors

# Previous Work

## 2020, High School Exercise

While I was a PR-assistant, I created a computer program that teaches high-school students how to use Python to perform a data analysis on real astronomical data. This exercise can be found on: <https://colab.research.google.com/github/Shiwi-97/Exoplanets/blob/master/De%20kleurplaat.ipynb>

## 2018 - 2020, My own online profile

As earlier mentioned, one of my hobbies is coding. In my studies I usually use python to create data-reduction pipelines, but in my free time I like to scrape web-sited and build it. One example is my personal web-page: <https://home.strw.leidenuniv.nl/~marrewijk/>

## 2019, Bsc Thesis

My bachelor Thesis can be found on Google Scholar at: <https://openaccess.leidenuniv.nl/handle/1887/74209>

## 2019, Recommendation systems

Advances in Data-mining is a master course in which you learn to implement algorithms like The Page-Rank Algorithm, Locality Sensitive Hashing, Cosine/Jaccard Similarities, or Mining Data Streams techniques. In this course, I made a matrix factorization algorithm to create a recommendation system to predict ratings of users from MovieLens (Netflix) data. My report can be found on my GitHub: [https://github.com/Shiwi-97/Matrix\\_factorization](https://github.com/Shiwi-97/Matrix_factorization)

## 2015, Speaker at Science Day

In my final year at High School, I was asked to close the annual Science Day, with a lecture on Black Holes. I presented a sixty minute talk. Thus from my early years on, I feel confident and I enjoy speaking to large groups.