

# LASSE BUUR RASMUSSEN

## Bioinformatics Graduate with Data Analysis experience

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## SUMMARY

- Graduating as a MSc in Bioinformatics from University of Copenhagen this November. My thesis focuses on the utilization of Natural Language Processing techniques for identifying novel antibiotics.
- I have developed my skills in data modelling, analysis and visualization alongside my studies by working as a Data Analyst at RealView A/S for more than 1.5 years. There, I've dealt with statistics of the Danish housing market and its development in recent years.
- I'm interested in the field of deep learning, which I've worked with in several graduate courses as well as my thesis. I'm very excited about the future of the field, and my ambition is to work with deep learning and/or data science.

## WORK EXPERIENCE

### Student Data Analyst

#### RealView A/S

Jan '18 – Ongoing (1½+ years)    Nivå, DK

- Responsible for a handful of projects related to Boligmarkedsstatistikken<sup>1</sup> and E-værdi<sup>2</sup>.
- Retrieve data from servers using SQL.
- Data preprocessing in Pandas.
- Explorative data analysis/Data visualization with Matplotlib and Seaborn.
- Asses performance of prediction models and predict troublesome cases.
- Data modelling in Scikit-learn.

### Receptionist

#### Lej Et Lig

Jan '17 – Nov '17    Valby, DK

- Work in a highly stressful environment where multitasking is essential.
- Social skills to interact with people from all walks of life and deal with difficult customers.
- Overcome unanticipated challenges both individually and also working in a team.

### Customer Interviewer

#### RetailWise

Feb '17 – Mar '17    Copenhagen, DK

- Approach and interacted with various types of people in a warm and non-intimidating manner.
- Ability to not let rejection affect job competency.

## CORE COMPETENCIES

Pandas    NumPy    Sklearn    Python

## EDUCATION

### MSc Bioinformatics

#### University of Copenhagen

Sep '17 – Nov '19    Copenhagen, DK

- Thesis title: *Natural Language Processing (NLP) Techniques for Identifying Bacteriocins*. Worked with deep learning and NLP to get hands on experience with state of the art frameworks Keras and TensorFlow.
- Been tuning my degree towards more statistics, programming and data science-related topics.
- Courses include:
  - Advanced Topics in Machine Learning
  - Introduction to Data Science
  - Bayesian Statistics
  - Statistical Causality
  - Linux and Python Programming
  - Statistics for Bioinformatics and eScience

### BSc Biochemistry

#### University of Copenhagen

Sep '13 – Jul '16    Copenhagen, DK

- Relevant courses:
  - Statistics for Biochemists
  - Discrete Mathematics
  - Physical Chemistry for Biochemists

## SOFTWARE SKILLS

Pandas	●●●●●	LaTeX	●●●●●
NumPy	●●●●●	Linux	●●●●●
Python	●●●●●	R	●●●●●
Sklearn	●●●●●	Keras	●●●●●
SQL	●●●●●		

Matplotlib	●●●●●
Seaborn	●●●●●
Anaconda	●●●●●
TensorFlow	●●●●●
Google Cloud	●●●●●

All skills relative to my skills in Pandas and NumPy

<sup>1</sup><https://finansdanmark.dk/toerre-tal/boligstatistik/boligmarkedsstatistikken/>

<sup>2</sup><https://www.e-nettet.dk/pengeogrealkreditinstitut/e-vaerdi/>

# PROJECTS

Implementations of the chemical structural and compositional similarity metric in R and Python  
**Novo Nordisk Foundation Center for Basic Metabolic Research**

📅 Feb 11, '19

- Wrote an efficient NumPy/Pandas implementation of an algorithm called *Chemical structural and compositional similarity*.
- Showed that my code is faster than the existing implementation by 2 orders of magnitude.
- My code was used in a **Nature Biotechnology publication** (Bolyen et al. 2019) as well as Brejnrod et al. 2019.

The Human Microbiome and its Interactions with the Immune System - Review

**Section of Microbiology - Department of Biology, UCPH**

📅 Jun '19

- My review shows that there is a great potential for therapies dealing with diseases and increasing health and wellbeing by targeting the human microbiome.

🔗 Click for online access

# LANGUAGES

Danish ●●●●●

English ●●●●●

# DATA SKILLS

- Machine Learning
- Data Analysis
- Data Visualization
- Data Modeling
- Statistics

# PUBLICATIONS

## 📄 Journal Articles

- Bolyen, Evan et al. (2019). “Reproducible, interactive, scalable and extensible microbiome data science using QIIME 2.” In: *Nature biotechnology* 37.8, pp. 852–857. ISSN: 1546-1696. DOI: 10.1038/s41587-019-0209-9. URL: <http://www.ncbi.nlm.nih.gov/pubmed/31341288>.
- Brejnrod, Asker Daniel et al. (2019). “Implementations of the chemical structural and compositional similarity metric in R and Python”. In: *bioRxiv Bioinformatics*, pp. 11–14. DOI: 10.1101/546150.