

## 1. Personal information

Name: Aaro Salosensaari  
Webpage : <https://aqsalose.fi>  
Orcid ID: <https://orcid.org/0000-0001-6698-6093>  
Google Scholar: <https://scholar.google.com/citations?user=MPQvUpcAAAAJ>  
Github: <https://github.com/aa-m-sa/>

## 2. Education

**Master of Science** (Filosofian maisteri). University of Helsinki. August 2, 2018.

Major: Applied Mathematics. Minor: Statistics.

**Bachelor of Science** (Luonnontieteiden kandidaatti). University of Helsinki. April 29, 2016.

Major: Mathematics. Minor: Computer science.

## 3. Work experience

### 5/2021 – *current*, Biostatistician.

*IQVIA, Global Database Studies.*

I am currently with [IQVIA](#) as a biostatistician.

### 5/2018 – 10/2020, Project researcher; PhD student (Applied Mathematics).

*Department of Internal Medicine; Dept. of Mathematics and Statistics, University of Turku.*

I was employed as a project researcher while pursuing PhD studies in [Turku Data Science Group](#) and [Turku Hypertension Center](#) (also partly funded 1-year personal grant from [Turun Yliopistosäätiö](#)). Main responsibilities incl. statistical analysis and probabilistic models of human gut microbiome metagenomics dataset (FINRISK 2002,  $N \approx 7000$ ).

Keywords: Machine learning, statistical programming, bioinformatics, numerical ecology.

Programming: R, Python, Stan.

### 5–12/2017, Research assistant.

*Department of Mathematics and Statistics, University of Helsinki.*

I was employed in [Inverse Problems Group](#) while working on my applied mathematics MSc thesis on inverse problems with applications in X-ray tomography. (Programming: MATLAB)

### 6–8/2016, Summer trainee.

*Atmospheric Dispersion Model Group, Finnish Meteorological Institution.*

Statistical programming for measurement data processing and forecast evaluation; improved visualization tool on [group website](#) (Programming: Python, HTML, JS).

### 6–8/2015, Summer research assistant.

*Department of Computer Science, Aalto University.*

Summer trainee in Statistical Machine Learning group. Implemented Gaussian Process based Bayesian optimization algorithms in MATLAB.

## 4. Technical skills (data science/analysis, programming, visualization)

**Strong skills:**

- **Statistical programming** in R language (random forests, GLMs, Bayesian statistics in Stan), and Python (Numpy, Scikit-Learn, Keras with Tensorflow backend).
- **Python scripting** in Linux/Unix environments (esp. Ubuntu), complementing Bash.
- **Version control and CI**: Git (branches, collating commits, rebases, GitHub merge request workflow, etc). Also used SVN. Some familiarity with CI (Travis).
- **Visualization and reporting** of statistical data and inferences: (R lang: ggplot, Python: matplotlib, Jupyter).

#### Basic skills:

- Data storage: Databases (SQL, Postgres, Redis), scientific formats (HDF5, biom, CSV).
- General numerical programming and applied mathematical modelling in MATLAB and C.
- Also *very basics* of web development (HTML5, JS, Apache server), and some application / object-oriented Python, Java.
- Cloud technologies: AWS (basic use of EC2), CSC services.

#### Also experience in:

- Writing reports and documents (Word, GDocs, Excel,  $\text{\LaTeX}$ ).
- Giving talks and presentations (PowerPoint, Google Docs).

### 5. Language skills

Finnish: Native speaker.

English: CEFR C1/B2, proficient.

Swedish: CEFR A2, basic user. (Studies completed at University of Helsinki with grade “good”).

### 6. Teaching

Ohjaajakisälli (junior course assistant), 9-12/2014 (Autumn term). Department of Computer Science, University of Helsinki. Course assistant at the introductory Java course computer lab.

### 7. Awards and prizes

2018. Master’s Thesis Award of the Faculty of Science of University of Helsinki.

### 8. Selected publications and scientific presentations

*For full list of publications, see [Google Scholar](#)*

Salosensaari, Laitinen, Havulinna, et al. “Taxonomic Signatures of Cause-Specific Mortality Risk in Human Gut Microbiome.” [Nature Communications](#) 12, no. 2671 (May 11, 2021).

Palmu, Salosensaari, et al. 2020. “Association Between the Gut Microbiota and Blood Pressure in a Population Cohort of 6953 Individuals”, [Journal of the American Heart Association](#). 2020;9.

10/2019 "Predictive survival analysis of human gut microbiome", *talk*, [1st Nordic Biomathematics Days](#), University of Helsinki.

### 9. Hobbies

Tabletop RPGs, books, reading HackerNews.