Aaro Salosensaari

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Resume
May 1, 2018

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location	Turku, Finland	email	aaro.salosensaari a t iki.fi
website	aqsalose.kapsi.fi	social	Twitter GitHub

Current

Recently I started working on my PhD thesis as a research assistant at University of Turku. The topic of the project is the mathematical and statistical analysis of the human gut microbial community. In general, I'm interested in many kinds of applied mathematics and statistics, topics including: data science, Bayesian and probabilistic methods, and machine learning, et cetera.

Education

2016 – (2018)	**Master of Science, student**	**University of Helsinki**

Estimated graduation: spring/summer 2018.
Major: Mathematics. *Minors:* Computer Science, Statistics.

2012 – 2016	**Bachelor of Science**	**University of Helsinki**

Major: Mathematics. *Minor:* Computer Science.
My B.Sc. thesis topic was about simulated annealing and computer vision. Link (in Finnish).

Work Experience

April 2018–	**Research assistant**	**Dept. of Clinical Medicine, University of Turku**

(I'm employed as a research assistant.)

May – December 2017	**Research Assistant**	**Dept. of Mathematics and Statistics, University of Helsinki**

I was employed as a research assistant in the Inverse Problems Research Group while I worked on my M.Sc. thesis (on algorithms for X-ray tomography).

June – August 2016	**Summer Trainee**	**Atmospheric Dispersion Modelling Group, FMI**

Worked in SILAM group at Finnish Meteorology Institute. My main tasks: forecast evaluation; visualization; processing satellite data and land station measurements (Python). Also basic web dev (HTML,JS).

June – August 2015	**Research Assistant**	**Dept. of Computer Science, Aalto University / HIIT**

I wrote Matlab software for Statistical Machine Learning research group, implementing Bayesian optimization algorithms.

Technical Skills and Experience

Main skills	Image processing and computer vision, data analysis and applied statistics, basic programming skills, applied mathematics, basic machine learning methods, numerical optimization.
Main prog. languages	Python (own projects, also CS studies), Java (CS studies), MATLAB (mathematics)
Also quite good	C, R, SciPy (+ NumPy, Sympy, Pandas), Linux (Ubuntu, Arch), Vim, Git, OpenCV
Beginner	Clojure, Bash, HTML5, JS (jQuery, d3.js), C++, regex/grep, SQLite3, Fortran, Mapreduce

Language Skills

Finnish native	**English** fine	**Swedish** basic

Selected Code and Projects

Robot programming lab   I created a Tic Tac Toe bot (link) with Lego Mindstroms + webcam + OpenCV + Java.

Probabilistic Models   (Project course in UoH) Bioinformatics-inspired probabilistic models challenge: Given set of data, learn a Bayes net that explains it 'best'. I implemented a BDeu-score based algorithm (link) that performed quite well.

Other Experience and Extra-curricular activities

Autumn Term 2014	**Junior TA**	**Dept. of Computer Science, University of Helsinki**

Worked as a junior teaching assistant for the introductory Java courses (course link and link).

January 2014 – 2015	**"Vapaa Matikka " - Open Textbook Project**	**Avoimet Oppimateriaalit ry.**

Contributed to a project to create a CC-BY licensed high school Linear Algebra textbook.

Interests and Hobbies

Science Fiction (Asimov, Heinlein, Arthur C. Clarke, Lovecraft, Bradbury, ...). Comics (mainly European). Lately also philosophy of AI and cognition.