

TOMMI MÄKLIN

tommi@maklin.fi

+358 449853289

<https://maklin.fi>

Education

- 2021
(expected) **PhD, computer science**
University of Helsinki,
Helsinki, Finland
- 2017 **MSc, statistical machine learning**
University of Helsinki,
Helsinki, Finland
- 2016 **BSc, statistics**
University of Helsinki,
Helsinki, Finland

Experience

- Jan 2018
— ongoing **Doctoral candidate**
Helsinki Institute for Information Technology, University of Helsinki, Helsinki, Finland
- Developed probabilistic models for DNA sequencing data from bacterial pathogens.
 - Provided efficient open source implementations of said models and distributed these on GitHub (<https://github.com/tmaklin>).
 - Collaborated with microbiologists and infectious diseases scientist in applying the models to answer epidemiological questions.
 - Communicated results at international conferences and academic journals.
- June 2018
— ongoing **Founder / part-time entrepreneur**
Heldata Oy, Helsinki, Finland
- Planned, organised, and hosted a 250-person Data Science networking and recruiting event in 2019 and 2020 (cancelled due to COVID-19).
 - Ran the day-to-day affairs of the four-person business.
- May 2016
— ongoing **Independent consultant**
- Consulted businesses and organizations in small matters.
 - Designed and taught a 3-day statistics crash-course for the Finnish Tax Administration's tax avoidance unit.
- May 2016
— Dec 2017
(20 months) **Research assistant**
- Designed and implemented a probabilistic model for identifying bacterial strains from DNA sequencing data.

Skills and strengths

People skills

- Creative problem solving.
- Communication and presentation.
- Project and time management.
- Collaboration as part of a team.

Technical skills

- Probabilistic modelling.
- Machine learning, from a statistician's perspective.
- Programming: C++, R, shell scripting, Python.

TOMMI MÄKLIN

tommi@maklin.fi

+358 449853289

<https://maklin.fi>

Academic publications

Preprints

Genomic epidemiology with mixed samples

T. Mäklin, T. Kallonen, J. Alanko, V. Mäkinen, J. Corander, and A. Honkela.
bioRxiv (2020).

High-resolution sweep metagenomics using ultrafast read mapping and inference

T. Mäklin, T. Kallonen, S. David, C.J. Boinett, B. Pascoe, G. Méric, D. M. Aanensen, E. J. Feil, S. Baker, J. Parkhill, S. K. Sheppard, J. Corander, and A. Honkela.
Wellcome Open Research (2020), awaiting peer-review.

Book chapters

Identifying bacterial strains from sequencing data

T. Mäklin, J. Corander, and A. Honkela.

Data Mining for Systems Biology, pp. 1-7, Humana Press, New York, NY (2018).

Positions of trust

Jan 2020

Chair of the board

— ongoing

University of Helsinki PhD Students association HYVÄT ry

Jan 2020

Deputy board member

— ongoing

Helsinki University Researchers and Teachers Association HUART ry

Jan 2020

Board member

— ongoing

Doctoral School in Natural Sciences, University of Helsinki

Jan 2020

Board member

— ongoing

Doctoral Programme in Computer Science, University of Helsinki

Feb 2017

Secretary

— ongoing

Finnish Statistical Society

Jan 2015

Chair of the board (2016), Board member (2015)

— Dec 2016

Statistics students' association Moodi ry

Presentations and talks

Invited talk (remote), 25 June 2020, *Thomson Group*, Wellcome Sanger Institute, UK.

Invited talk, 29 November 2019, *CompLifeSci 4th Annual Meeting*, Turku, Finland.

Contributed talk, July 2019, *ISMB/ECCB 2019*, Basel, Switzerland.

Contributed talk, 23-24 May 2019, *BREW 2019*, Berlin, Germany.

Flash talk, 25-26 April 2019, *MASAMB 2019*, European Bioinformatics Institute, UK.

Contributed talk, 4-7 November 2018, *PROBGEN 2018*, Cold Spring Harbor, NY, US.

Contributed talk, 29-31 October 2018, *RWEYS*, Paris, France.

Contributed talk, 19-20 March 2018, *MASAMB 2018*, St Andrews, UK.