SANNI KUIKKA

Curriculum Vitae | July 2026

I am a computational social scientist working at the intersection of sociology and computer science, with specific expertise in applied machine learning and AI in social research. My current work focuses on how ML and AI methods can be leveraged in the study of the human life course, to further understand the complex inequalities and disadvantages for labor market outcomes. I am finishing my PhD in this topic in November 2026.

Work address
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Personal information
Nationality: Finnish
Pronouns: she/her

Education

2020/09 – ongoing	PhD candidate in Sociological Demography, Stockholm University, Sweden, affiliated with the project *Understanding society through register-based machine learning* at Linköping University, Sweden. Topic: Exploring ML & AI tools with population register data in predicting the human life course for labor market and socioeconomic outcomes.
2018 -2020	MSc in Computational Social Science, Institute for Analytical Sociology, Linköping University, Sweden
2017-2018	Master's level studies in Sociology and Social Research, University of Trento, Italy
2012-2016	Bachelor in Social Services, Tampere University of Applied Sciences, Finland

Employment

2020/04-2021/08	Research Assistant, Stockholm University, Department of Sociology, Demography Unit, in project *Childhood psychosocial and environmental predictors of crime and victimization across life.* Tasks included data wrangling and descriptive statistics focusing on crime, e.g. using ICD-codes to identify violent crime victims from population registers.
2019/11 – 2025/12	Visiting Researcher, The Finnish Institute for Health and Welfare, Finland. Data collaboration as a part of my PhD project.
2019/06 – 07	Research Intern, The Finnish Institute for Health and Welfare, Finland. Producing a report for the We Foundation, describing risk groups for social exclusion in youth. Work included data wrangling, producing descriptive statistics, and sole-authoring the report.
2012 – 2018	Counsellor in the Social Welfare sector, Several employers, Finland. Work was situated mostly in the Occupational Rehabilitation sector, and included diverse tasks, such as individual and group counselling, planning and executing group activities, administrative tasks both internally as well as for external welfare subsidy providers, and communicating & collaborating with several authorities in the social welfare sector.

Publications & work in progress

2024	**Kuikka, S.** The (Un)Predictability of Early (Un)Employment: A Machine Learning Approach. Socius, 10.
2022	Beckley, A., **Kuikka, S.**, Sivertsson F. & Sarnecki J. The Stockholm life-course project: investigating offending and non-lethal severe violent victimization, Nordic Journal of Criminology, 23:1, 61-82.

2015	Koivula, U.-M., & **Kuikka, S.** (Eds.) SEE ME! Multicultural Encounters with Creative Methods. Tampere University of Applied Sciences. Series B. Reports 79. ISBN 978-952-5903-67-6(PDF).
in progress	**Kuikka, S.** Unpacking the (Un)Predictability of Early (Un)Employment (tentative title). Follow-up on Kuikka (2024), studying the combinations of variables that together predict (un)employment, as well as which combinations drive the ML model to make wrong predictions, in the context of Finland. Principal Component Analysis is the main tool, literature combining several social scientific theorical approaches.
in progress	**Kuikka S.** Predicting Lifetime Disposable Income with Joint Family Background Characteristics (tentative title). Exploring tree-based ML algorithms in predicting lifetime disposable income, and arguing for the fit of the models in capturing theoretical plurality, over the standard ones used in the social mobility literature. The results uncover macro predictability of the outcome, as well as describe sub-groups that separately predict each outcome class. The study leverages Swedish longitudinal population registers.
in progress	**Kuikka S.** & Thaning, M. Bounded Measure for Inequality of Opportunity (IOp) in Income (tentative title). The study leverages tools both traditional (fixed effects) and contemporary (machine learning) for bounded measurement for IOp in income, using detailed measurements from longitudinal individual-level population registers, and deriving a lifetime disposable income measurement averaged across approx. 3 decades.
in progress	**Kuikka S.** & Kim, W. Differing Predictors for Education-Occupation Mismatch Between the Migrant and Native Populations in Sweden (tentative title). Using ML tools for understanding the complex set of predictors for education-occupation mismatch, that likely differs between the migrant and native populations, in the context of Sweden. The study leverages individual-level and longitudinal population register data, and scopes several theories related to transition into the labor market, and education-occupation mismatch.
in progress	Sivak, L., Stulp, G. […] **Kuikka, S.** Births are difficult to predict even with rich survey and full-population register data (tentative title). A community paper reporting the results from Predicting Fertility data challenge, a mass collaboration aiming to measure the predictability of fertility outcomes in the context of The Netherlands. The study had several interdisciplinary research teams working on the same data (panel study & population registers) and the same task (predicting who will have a(nother) child in the near future).

Conference presentations & invited talks

2024/11	Workshop for Demystifying Machine Learning for Population Scientists, Rostock Germany: oral presentation
2024/08	Nordic Sociological Association Conference, Norrköping Sweden: oral presentation in session *Social Stratification in a Digital World*
2024/06	European Population Conference, Edinburgh UK: poster presentation in session *Migration, Economics, Policies, History*
2024/04	The Swedish Conference on Computational Social Science, Uppsala Sweden: flash talk
2024/04	Forte EpiDem Junior Conference, Torekov Sweden: oral presentation
2024/01	ICON network meeting at the Department of Public Health, Stockholm University, Sweden: Invited talk entitled *Predicting the Human Life Course - Register-based Machine learning*
2022/06	Nordic Demographic Symposium, Oslo Norway, oral presentation in session *Population Projections 2*
2021/05	Population Association of America Annual Meeting, online, oral presentation in session *Simulation and Machine Learning in Demography*
2021/03	SWE-REG Spring meeting, online, oral presentation in session *Machine learning methods in the medical and social sciences*

Professional service

2024/12	Evaluation committee member for ODISSEI Microdata Access Grant, Erasmus University Rotterdam, the Netherlands. This work provided me with experience in evaluating and ranking the suitability of applications for the given grant in an international context.
2024/08	Chair of the session *Crime and Deviance* at the 31st Nordic Sociological Association conference, Norrköping, Sweden. This work provided me with experience as the session chair, including administrative tasks, such as evaluating submissions, and correspondence.
2021-2023	PhD student council, Department of Sociology, Stockholm University, Vice president and secretary 2022, regular member 2021 & 2023. This work provided me with administrative experience around meeting protocols, writing minutes, and planning and organizing events.
2019-2020	Student representative at the study board for Computational Social Science master's program, Institute for Analytical Sociology, Linköping University. This work provided me with experience around meeting protocols, and matters related to student admissions and developing the CSS study program.

Relevant courses & workshops

2023	SICSS Summer Institute in Computational Social Science – ODISSEI Erasmus University Rotterdam, The Netherlands. This interdisciplinary course was a pilot for the PreFer data challenge for predicting fertility outcomes using ML tools and Dutch data, both population registers and panel data.
2021-2023	SINGS Swedish Interdisciplinary Graduate School in Register-Based Research, Karolinska Institute, Sweden. This course covered a wide range of topics related to using population register data in research, including ethical and data safety considerations, as well as constant interdisciplinary exchange between the social and medical sciences.
2020	Topics in Digital and Computational Demography, Max Planck Institute for Demographic Research, Germany. This course covered aspects of digital trace data, social media data, and bibliometric data, for demographic research.
2018-2020	A variety of courses in Computational Social Science (MSc), including tools and approaches such as agent-based modelling, social network analysis, complex systems, and web-scraping big data.

Teaching & pedagogy

2024	Studied: Professional development course 1 - Teaching and Learning, Centre for the Advancement of University Teaching, Stockholm University, Sweden (7.5 ECTS). This course equipped me with a set of pedagogical approaches focusing on student learning and student diversity in higher education. As a final product, I planned a teaching moment introducing Computational Social Science and computational thinking for an advanced methods course on master's level in Sociology.
2015	Co-editor for an e-book about pedagogical approaches of a series of Erasmus Intensive Program courses. This experience provided me with in-depth reading on pedagogical topics, as well as administrative skills in editing a book.
2013	Course Assistant, Multi-cultural Youth Work, Tampere University of Applied Sciences, Finland. This experience provided me with skills in organizing a course in collaboration with the university and local actors in the welfare sector, as well as administrative work in documenting and correspondence.

Grants

2024/04	Travel and accommodation grant by the Conference on Computational Social Science in Uppsala Sweden

2022/06	Lamberg's scholarship foundation 2022/2023, travel grant to participate in the SICSS Summer Institute (27 000 SEK)

Language skills

Finnish	speaking, reading, and writing: native
English	speaking, reading, and writing: C2
Swedish	speaking, reading and writing: B2
Italian	speaking, reading, and writing: A2
R	advanced
Python	advanced
NetLogo	beginner