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Posted Nov. 4, 2025, set to expire Mar. 6, 2026

Job Title Postdoctoral researcher positions in Probabilistic

Machine Learning research group, Aalto University

**Department** T313 Dept. Computer Science

**Institution** Aalto University

, , Finland

Date Posted Nov. 4, 2025

Application Deadline Open until filled

Position Start Date Available immediately

Job Categories Post-Doc

Academic Field(s) Computer Science

Job Website https://aalto.wd3.myworkdayjobs.com/aalto/job/Otaniemi-

Espoo-Finland/Postdoctoral-researcher-positions-in-Probabilistic-Machine-Learning-research-group--Aalto-

University\_R44662

Apply By Email

**Job Description** 

Samuel Kaski's research group [url=https://research.cs.aalto.fi/pml/]Probabilistic Machine Learning is searching for postdocs to work on AI fundamentals in exciting projects. The work includes collaboration with [url=https://www.ellisinstitute.fi]ELLIS Institute Finland, the [url=https://fcai.fi]Finnish Center for Artificial Intelligence (FCAI), the [url=https://ai-fun.manchester.ac.uk]Centre for AI Fundamentals at the University of Manchester, the rest of [url=https://ellis.eu]ELLIS, and researchers from other fields. Samuel Kaski is Professor of Computer Science in Aalto University and Professor of AI in the University of Manchester. He is Director of [url=https://www.ellisinstitute.fi]ELLIS Institute Finland and the [url=https://fcai.fi]Finnish Center for Artificial Intelligence . His research group develops machine learning principles and methods focusing on a few key topics (see "Machine learning foundations" below), often working with researchers of other fields in new exciting applications (see the other topics



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below).

### 3 Topics

You will join a team of machine learning researchers developing new collaborative AI principles and methods. The topic opens up fresh problems in fundamental ML and enables new applications that make a real difference in, for example, scientific research and discovery and intelligent decision-making. Team members bring complementary expertise, and by working together we address novel problems that no single approach could solve alone.

### Multimodal foundation models

Key words: multimodal learning, grounded and human-aligned fine-tuning, test-time adaptation You will join our research team developing new methods for training and adapting large multimodal foundation models. The goal is to make these models more grounded, efficient, and human-aligned, enabling them to reason across modalities such as text, vision, and 3D perception. Depending on your interests, you might work on topics such as large-scale pretraining, test-time adaptation, efficient model distillation, or alignment through human feedback. The research connects to international initiatives and offers opportunities to collaborate with leading European groups developing open and trustworthy AI systems at scale.

## Out-of-Distribution Deployable Machine Learning

Key words: out-of-distribution generalization, machine learning, active learning, human-in-the-loop learning, distribution shift, probabilistic modelling, computational rationality, sequential experimental design, collaborative AI, decision support

We are looking for a new postdoc in the team that develops methods for deploying machine learning models. The team has several exciting ideas and frameworks we work on, and opportunities for applying the methods with top-notch collaborators. Your work will develop algorithms, inference methods, and frameworks to adapt models from training data to test environments, which is necessary to resolve distribution shifts, hidden confounders, and faulty assumptions. Depending on your interests, your work will explore domain adaptation, learning from expert feedback, sequential experimental design, collaborative AI, and other aspects of adapting models to test environments.

### Your experience and ambitions

We expect the candidates to hold or be close to getting a relevant doctoral degree and have a solid background in the mathematics/statistics/computer science needed in machine learning. Previous experience in the application fields is an advantage. Capability of both independent work and teamwork, and excellent written and spoken English are necessary.

What we offer



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### We provide

### 1) RESEARCH ENVIRONMENT

You will work in Professor Samuel Kaski's research group

([url=https://research.cs.aalto.fi/pml/]Probabilistic Machine Learning Group). We design collaborations as we go, according to what the research needs. Collaborators include but are not restricted to the other groups in [url=https://www.ellisinstitute.fi]ELLIS Institute Finland, the Finnish Center for Artificial Intelligence ([url=https://fcai.fi/researchers]FCAI), other sites of the European Laboratory for Learning and Intelligent Systems ([url=https://fcai.fi/ellis-unit-helsinki]ELLIS) and [url=https://ai-fun.manchester.ac.uk]Centre for AI Fundamentals of the University of Manchester and a number of excellent researchers in other fields in our applications.

## 2) JOB DETAILS

Postdoc positions are typically made for up to three years. Starting dates are flexible. All positions are negotiated on an individual basis. We are strongly committed to offering everyone an inclusive and non-discriminating working environment. We warmly welcome qualified candidates from all backgrounds to apply and particularly encourage applications from women and other groups underrepresented in the field.

All our positions are fully funded and the salary is based on the Finnish universities' pay scale. The starting salary depends on the level of the position and the previous experience and is typically increased as the experience grows. All employees have access to the occupational health care services and are covered by the Finnish national health insurance system.

## Ready to apply?

Submit your application through our recruitment system Workday by the button below "apply now". The deadline for applications is January 4 2026 at 23:59 Finnish time.

## Required attachments

- -Cover letter (1-2 pages).
- -CV List of publications (please do not attach full copies of publications)
- -A transcript of doctoral study
- -The degree certificate of your latest degree. If you don't yet have a PhD degree, a plan of completion must be submitted.
- -Contact details of two senior academics who can provide references. We will contact your referees if we need recommendation letters.

All materials should be submitted in English in a PDF format. Note: You can upload max. five files to the recruitment system, each max. 5MB.

Please note: Aalto University's employees and visitors should apply for the position via our internal



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system Workday -> find jobs (not external aalto.fi webpage on open positions) by using their existing Workday user account.

Contacts: Coordinator Fang Wang (fang.wang@aalto.fi)

### More Information

We are part of [url=https://www.ellisinstitute.fi]ELLIS Institute Finland, [url=https://fcai.fi/]Finnish Centre for Artificial Intelligence FCAI and [url=https://fcai.fi/ellis-unit-helsinki]ELLIS Unit Helsinki. More information on their pages, and the frequently asked questions on [url=https://fcai.fi/we-are-hiring]this page.

Aalto University is a community of bold thinkers where science and art meet technology and business. We are committed to identifying and solving grand societal challenges and building an innovative future. Aalto has six schools with 14 000 students and a staff of 5000, of which more than 400 are professors. Our main campus is located in Espoo, Finland. Diversity is part of who we are, and we actively work to ensure our community's diversity and inclusiveness. This is why we warmly encourage qualified candidates from all backgrounds to join our community.

The Department of Computer Science is an internationally-oriented community and home to world-class research in modern computer science, combining research on foundations and innovative applications. With over 40 professors and more than 450 employees from 50 countries, it is the largest department at Aalto University and the leading computer science research unit in northern Europe. Computer science research at Aalto University ranks high in several international surveys (7th in Europe and 1st in the Nordics (NTU 2023); and 88th worldwide in Times Higher Education subject ranking 2025).

#### **About Finland**

Finland is a great place for living with or without family - it is a safe, politically stable and well-organized Nordic society. Finland is consistently ranked high in quality of life and was just listed again as the happiest country in the world: [url=https://www.worldhappiness.report/news/world-happiness-report-2025-people-are-much-kinder-than-we-expect-research-shows/]World Happiness Report 2025: People are much kinder than we expect, research shows | The World Happiness Report. . For more information about living in Finland: [url=https://www.aalto.fi/en/careers-at-aalto/why-finland]Why Finland? | Aalto University

#### More info:

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## **Contact Information**

Please reference Academickeys in your cover letter when applying for or inquiring about this job announcement.

Contact

Finland