KERSTIN BACH

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SUMMARY

Bach develops AI methods that combine reasoning, context-awareness, and interpretability to support complex, knowledge-intensive decisions. Her research explores human-AI interaction, trustworthy and explainable AI, with a particular focus on case-based reasoning and similarity-based methods. She aims to build versatile, transparent systems that work across domains and are grounded in real-world use.

EXPERIENCE

2021 -	Professor in Artificial Intelligence, Department of Computer and Science, NTNU, Norway
2025 -	Director, Norwegian Open AI Lab, Trondheim, Norway
2023 -	Research Director, Norwegian Research Center for AI Innovation (NorwAI) @ NTNU
2021 - 2023	Program Manager, Norwegian Research Center for AI Innovation (NorwAI) @ NTNU
2017 - 2021	Associate Professor, Department of Computer and Science, NTNU, Norway
2015 - 2017	Post-Doc & Researcher, Department of Computer and Science, NTNU, Norway
2013 - 2014	Research Engineer, Verdande Technology, Trondheim, Norway
2010 - 2012	Researcher at the German Research Center for AI (DFKI), Kaiserslautern, Germany
2007 - 2012	Ph.D. Student, Department of Computer Science, University of Hildesheim, Germany

EDUCATION

Dr. rer. nat., Department of Computer Science, IIS Lab, U Hildesheim (Ger) — Dec 2012
M.Sc. in Information Management & Information Technology, U Hildesheim (Ger) — Apr 2007
B.Sc. in Information Management & Information Technology, U Hildesheim (Ger) — Aug 2004

RESEARCH STAYS (more than 3 months)

Visiting researcher at the AI and Reasoning (AIR) Group, School of Computing, Engineering and Technology, Robert Gordon University, Aberdeen, UK — Mar 2025 - Jun 2025
Visiting researcher at The Leiden Institute of Advanced Computer Science (LIACS), Leiden University, The Netherlands — Oct 2024 - Feb 2025

RESEARCH PROJECTS AND CENTERS

- **2023-2027**: AI-MENT - Machine learning to tailor treatments in mental health, Co-PI and lead for the development of AI models, funded through NTNU Health Strategic Area
- **2023-2027**: DigiFrailCare - A sustainable multidisciplinary model for personalized care for frail and older people using Artificial Intelligence and the next generation medical records, Co-PI and lead for the development of AI models, funded through NTNU Health Strategic Area
- **2023-2026**: TrustLLM - Democratising trustworthy and factual large language model technology for Europe - Co-PI at NTNU, funded through Horizon Europe, grant number 101135671
- **2023-2027**: LABDA - Learning Network for Advanced Behavioural Data Analysis - PI at NTNU, funded through Marie Skłodowska-Curie Actions (MSCA), grant number 101072993
- **2022-2025**: CaReScreen - A clinical decision support system for cancer rehabilitation - Collaboration, funded through Research Council of Norway, grant number 331870
- **2021-2028**: SmaRTWork - a digital system for personalised return to work recommendations for sick-listed with musculoskeletal disorders, Co-PI and lead for the development of the CBR approach and technical implementation, funded through Research Council of Norway, grant number 315041

- **2021-2027** PERSEUS Doctoral Programme (DP), Area Lead for Big Data & Artificial Intelligence, funded through European Union's Horizon 2020 research and innovation programme under the Marie Skłodowska-Curie grant agreement 101034240
- **2020-2028** SFI NorwAI: Norwegian Research Center for AI Innovation, Research Director, funded through Research Council of Norway, grant number 309834
- **2020-2025** PABS: Physical Activity Behaviour and Sleep and their impact on public health, Co-PI and lead for the development of AI models, funded through NTNU Health Strategic Area
- **2020-2025** EXAIGON: Explainable AI systems for gradual industry adoptionResearcher and PhD supervisor, funded through Research Council of Norway, grant number 304843
- **2020-2024** SupportPrim: Optimizing management of musculoskeletal disorders in primary care, Co-PI and lead for the development of the CBR approach and technical implementation, funded through Research Council of Norway, grant number 303331
- **2019-2021** AI4EU: European Artificial Intelligence On-Demand Platform and Ecosystem, PI, funded through Horizon 2020, grant number 825619
- **2018-2021** Back-UP: Personalised prognostic models to improve well-being and return to work after back and neck pain, Co-PI, funded through Horizon 2020, grant number 777090
- **2016-2021** selfBACK: A decision support system for self-management of low back pain, Co-PI and overall project manager, coordinated by NTNU, funded through Horizon 2020, grant number 689043
- **2015-2023** SFI Exposed Aquaculture: Knowledge and technology for robust, safe and efficient fish farming at exposed locations, Researcher and PhD supervisor, funded through Research Council of Norway, grant number 237790
- **2012-2014** UNIFARM: GNSS User Forum on Navigation based Innovation for Farmers, researcher, funded through FP 7, grant number 287206

PRIZES & AWARDS

Best paper award at 12th International Conference on Prestigious Applications of Intelligent Systems, PAIS 2023 - co-located with ECAI 2023 Oct 2023
Awarded for the best doctoral dissertation in 2012/2013 at the Department of Mathematics Natural Science, Economics and Computer Science of the University of Hildesheim Jul 2013

LEADERSHIP

- Director Norwegian Open AI Lab [2025 -]
- Research Director Norwegian Research Center for AI Innovation (NorwAI) [2023 -]
- Coordinator of the FEMAIS mentorship program at NorwAI [2020 -]
- Board member Norwegian Artificial Intelligence Society (NAIS) [2018 -]
- Core team member of the Norwegian Open AI Lab [2017 -]
- Board member German Artificial Intelligence Society [2017-2025]
- Chair of the German Special Interest Group on Knowledge Management; Board member GI Technical Committee Artificial Intelligence (German Informatics Society) [2017-2025]
- Deputy Head for Research of the Data & Artificial Intelligence Unit (DART), IDI, IE, NTNU [2017 -]

INTERNAL & EXTERNAL ACADEMIC ACTIVITIES (selection)

- Program Co-Chair for 34th International Conference on Case-Based Reasoning (ICCBR-2025), co-located with ECAI/IJCAI 2026 in Bremen, Germany

- Program Chair for 13th Conference on Prestigious Applications of Intelligent Systems (PAIS-2024) at the 27th European Conference of Artificial Intelligence (ECAI-2024)
- Program Co-Chair for the Norwegian AI Symposium (NAIS) 2019 (Trondheim), 2025 (Tromsø)
- Program Co-Chair NorwAI Innovate 2024
- Program Co-Chair for the 14th Scandinavian Conference on AI (SCAI) 2024 (Jönköping)
- Member of the advisory group for defining NTNU's Strategic Research Area 2024–2031 on Health and Life Science [2024]
- Board member of the SFI Centre for Innovative Ultrasound Solutions – for health care, maritime, and oil & gas (CIUS) [2022-2025]
- Deputy Chair of the Gender Committee of the AI4EU Platform & Community Project [2020-2021]
- External reviewer for professorships at the University of Würzburg (Germany), University of Osnabrück (Germany), Florida Institute of Technology (USA), KTH (Sweden), University of Bergen (Norway), OsloMet (Norway), UiT The Arctic University of Norway (Norway), University of Trier (Germany)
- External member for hiring committees for PhD, postdoc, and professorships at the University of Bergen (Norway), OsloMet (Norway), UiT The Arctic University of Norway (Norway)
- Program Co-Chair for the 27th International Conference on Case-Based Reasoning (ICCBR 2019) in Otzenhausen, Germany [2019]
- Reviewer for research grants and personal fellowships for the European Commission, Scientific Commission Lower Saxony (Germany), Finnish Research Fund, German AI Centers, DFG (Germany), Serbian Research Fund, Research Council of Norway, Research Council of Finland [2017-]
- Co-Chair and Steering Group Member: Knowledge Discovery in Healthcare Workshop Series [2016 -]
- Technical Manager of the Open Source Tool myCBR [2010-]
- PC member for ICCBR, IJCAI, ECAI, AAAI, ICLR, ICAART, ICML, NAIS, KI, NIKT, LWDA
- Reviewer for Knoweldge-Based Systems, Engineering Applications in AI, Knowledge Engineering Review, JMIR [2009-]

PROFESSIONAL MEMBERSHIPS

- Member of ELLIS [2025-]
- Member of IEEE [2021-]
- Member of ACM [2020-]
- Member of Norwegian Artificial Intelligence Society [2018-]
- Member of Tekna [2014-]
- Member of German Computer Science Society [2007-]

POSTDOCTORAL FELLOWS AND RESEARCHERS

For the following postdoctoral fellows and researchers, I was responsible for guiding their research.

- Betül Bayrak (2025–): SFI NorwAI, WP SOC and TRUST
- Anuja Vats (2024–2025): SmaRTWork project
- Abdulmajid Murad (2023–2024): NorwAI, WP DATA
- Bjørn Magnus Mathisen (2021–2024): SFI Exposed Aquaculture
- Tiago Veiga (2020–2023): ERCIM Fellow & AI4EU

- Irina Reshodko (2020–2021): Automated feedback and instruction system for passenger car driving schools, co-supervised by Odd Erik Gundersen
- Ilya Ashikhmin (2017–2021): selfBACK project & Back-Up project
- Tomasz Szczepanski (2016-2021): selfBACK project & Back-Up project

PHD STUDENTS

PhD Students PhD Students for whom I am or have been the main supervisor:

- Sophia Sylvester (2023 –): Radar Data and Machine Learning in Psychiatric Care: Novel Approaches for Advancing Sleep/Wake Estimation and Aggression Prediction – co-supervised by Håvard Kallestad
- Abdul Kazeem Shamba (2023 –): Hybrid AI for Anomaly Detection and Predictive Maintenance on Wireless Embedded Sensor Nodes – co-supervised by Gavin Taylor
- Stuart Galina Ottersen (2023 –): Using machine learning to predict response and dropout in RCT data from digital sleep therapy – co-supervised by Håvard Kallestad
- Tom Hermann (2023 – 2025): Using Artificial Intelligence for Understanding Health Risks in Elderly – co-supervised by Håvard Skjellegrind
- Lena Jedamski (2023 – 2024): Topic: Building a Recommendation System for Trustworthy Methods in AI Applications – co-supervised by Andreas Hafver
- Betül Bayrak, Ph.D. (2022 – 2025): Post-hoc eXplainable Artificial Intelligence Methods: Counterfactuals and XCBR Applications – co-supervised by Helge Langseth
- Paola Marin Veites (2021 – 2023): Topic: The Use of Case-Based Reasoning in Muscoloskeletal Pain Complaints – co-supervised by Ottar Vasseljen
- Aleksej Logacjov, Ph.D. (2021 – 2025): Large-scale Self-supervised Learning for Enhancing Accelerometer-based Human Activity and Sleep Recognition – co-supervised by Paul Jarle Mork
- Sverre Herland, Ph.D. (2020 – 2025): Thesis: Reinforcement Learning for Robotic Control and Manipulation in Ocean Space Applications – co-supervised by Helge Langseth and Ekrem Misimi
- Deepika Verma, Ph.D. (2017 – 2022): Thesis: Using Case- based Reasoning for Creating Intelligent Systems in Healthcare – co-supervised by Paul Jarle Mork
- Bjørn Magnus Mathisen, Ph.D. (2016-2021): Thesis: Using Similarity Learning to Enable Decision Support in Aquaculture – co-supervised by Agnar Aamodt and Helge Langseth

PhD Students for whom I am or have been a co-supervisor:

- Folke Jernbert (2025 –): Summarization of Clinical Texts Using LLMs – main supervisor Benjamin Kille
- Christoph Eder (2025 –): Multi-view data augmentations for time series data – main supervisor Benjamin Kille
- Tayyaba Arshad (2025 –): Synthetic MRI for Improved Cancer Diagnosis and Treatment – main supervisor Adam Leon Kleppe
- Tomasz Szczepanski (2024 –): Improved diagnosis by digital gold mining in historical neurophysiological data – main supervisor Kristian Bernhard Nilsen
- Anna Rodum Bjøru, Ph.D. (2021 – 2026): Explainable AI with Deep Bayesian Networks – main supervisor Helge Langseth
- Emanuel Lorenz (2022 - 2026): Multimodal brain-computer interface (BCI) for Neuromotor Rehabilitation – main supervisor Xiaomeng Su
- Hafiz Areeb Asad, Ph.D. (2021 – 2025): Utility-Guided Energy Management for Energy- Harvesting IoT Devices – main supervisor Frank Kraemer

- Fredrik Granviken, Ph.D. (2020 – 2024): Thesis: Personalized Decision Support in the Management of Musculoskeletal Pain Disorders in Primary Physiotherapy Care – main supervisors Ingebrigt Meisingset and Ottar Vasseljen
- Eirik Lund Flogard, Ph.D. (2020 – 2024): Thesis: Improving Labour Inspection Efficiency via Machine Learning – main supervisor Ole Jakob Mengshoel
- Håkon Måløy, Ph.D. (2018 – 2023): Thesis: Learning neural representations for the processing of temporal data in deep neural networks – main supervisor Keith Downing
- Abdulmajid Murad (2018 – 2023): Thesis: Uncertainty-Aware Autonomous Sensing with Deep Reinforcement Learning – main supervisor Frank Kraemer
- Elise Klæbo Vonstad, Ph.D. (2017 – 2022): Thesis: Improving Exergame Technologies for Older Adults Using Machine Learning – main supervisor Jan Harald Nilsen
- Johannes Rehm (2020 –): – main supervisor Odd Erik Gundersen
- Di Wu, Ph.D. (2017 – 2022): Thesis: Computational Risk Analysis for Digitizing Sustainable Urban Water Supply Systems – main supervisor Hao Wang
- Hoda Nikpour, Ph.D. (2015 – 2021): Thesis: Problem solving in uncertain domains by a Bayesian supported knowledge-intensive case-based reasoning method – main supervisor Agnar Aamodt
- Fabienne Rössler (2018 –): – main supervisor Nadav Bar

Ph.D. Committees (internal and external) where I served as opponent, reviewer and/or administrator:

- Maedeh Nasri, Leiden University, The Netherlands (2024): A compass towards equity: a data analysis framework to capture children's behaviour in the playground context [opponent]
- Viktor Eisenstadt, University of Hildesheim, Germany (2024): Supporting Early Phases of Conceptual Design in Architecture Using Case-Based Reasoning and Distributed Artificial Intelligence [opponent]
- Patrick Klein, University of Trier, Germany (2024): Combining Expert Knowledge and Deep Mining with Case-Based Reasoning for Predictive Maintenance [opponent]
- Andrea Marheim Storås, OsloMet, Norway (2024): Beyond the Black Box: Transparent Machine Learning Systems for Medical Applications [opponent]
- Mir Riyanul Islam, Märladalen University, Sweden (2024): Explainable Artificial Intelligence for Enhancing Transparency in Decision Support Systems [opponent]
- Sven Myrdal Opalic, University of Agder, Norway (2023): Advanced Warehouse Energy Storage System Control Using Deep Supervised and Reinforcement Learning [opponent]
- Claudio Díaz, University of Sydney, Australia (2023): Mining Activity Tracker Data To Analyse Physical Activity Behaviours And Provide Personalised Feedback In Health Education Programmes [opponent]
- Devi Ganesan, IIT Madras, India (2021): An Empirical Study of the Benefits of Domain Knowledge in Bottom-up Learning [reviewer]
- Tor Gunnar Høst Houeland, NTNU (2020): Automated lazy metalearning in introspective reasoning systems [administrator and member of the committee]
- Pascal Reuss, University of Hildesheim, Germany (2019): Case Factories: A Maintenance Cockpit for distributed structural Case-Based Reasoning Systems [opponent]
- Patrick Schuch, NTNU (2019): Deep Learning for Fingerprint Recognition Systems [administrator and member of the committee]
- Thomas Falch, NTNU (2018): ImageCL and Other Techniques and Tools for Optimizing Applications Utilizing Heterogeneous Computing [administrator and member of the committee]

- Konstantinos Antonakopoulos, NTNU (2017): Artificial Development and Evolution using Common Developmental Genomes [administrator]

TEACHING ACTIVITIES

As deputy group leader of the Data & Artificial Intelligence Unit, I have been involved in the planning of the AI curriculum for which the unit is responsible. This includes restructuring, introduction of new courses as well as overseeing TA allocations.

I have been responsible for teaching the following courses at NTNU:

- TDT4173 - Machine Learning (M.Sc. Level, 2017-2020)
- TDT55 - Knowledge-Intensive CBR (M.Sc. Level, 2017-)
- DIXIL – Advanced Topics in CBR (Ph.D. Level, 2022-)
- IT8000 – Advanced Topics in CBR (Ph.D. Level, 2019-2020)

Additionally, I have been giving regular modules and guest lectures:

- IT6205 - Enabling Technologies for Digitalization: AI Module (2020-)
- TDT4171 - Artificial Intelligence Methods: Case-Based Reasoning (2017-)
- TDT4136 - Introduction to Artificial Intelligence: Planning (2018-2021)

KEYNOTES & INVITED TALKS (selection of recent activities)

- Less is More: Interpretable and Sustainable Machine Learning, IIT Colombo, Sri Lanka [Jun 2025]
- AI and Health: Harnessing Norwegian Data for Personalized and Predictive Care, School of Computing Science, University of Glasgow, UK [May 2025]
- AI and Health: Challenges and Opportunities for Interdisciplinary Collaboration. AIR Research Seminar - School of Computing, Engineering, and Technology at RGU, Aberdeen [Mar 2025]
- XAI for Trustworthy AI: Bridging Interpretability and Reliability. Invited Seminar Talk at the School of Electrical Engineering and Computer Science, KTH [Feb 2025]
- Interdisciplinary Collaboration on AI and Health. LIACS Seminar, Leiden University [Nov 2024]
- Involving Practitioners in Artificial Intelligence Development, Keynote, Embracing Human-Aware AI in Industry 5.0 Workshop @ ECAI [Oct 2024]
- Artificial Intelligence for Data Mining, Keynote, ENGAGE.EU T5.4 Expert Group Workshop 2024 [Oct 2024]
- Beyond Big Data: Balancing Knowledge And Data For Effective Human Activity Recognition, Keynote, 9th International Conference on Ambulatory Monitoring of Physical Activity and Movement (ICAMPAM) [Jun 2024]
- Artificial Intelligence in Health Care, Talk, Trondheim Health Tech Week [Jun 2024]
- Developing Trustworthy AI Applications: An Overview of the Recent Developments within NorwAI, Trustworthy AI Seminar, Märladalen University, Sweden [Jan 2024]

PUBLICATIONS

55+ peer-reviewed journal articles, 60+ peer-reviewed conference papers, 4 edited conference proceedings, 2 journal editorials, 2 book chapters, Google Scholar metrics: 2400+ citations, h-index: 26

Journal Articles

[J1] Maciej Mozolewski, Betül Bayrak, Kerstin Bach, and Grzegorz J. Nalepa. "From Prototypes to Sparse ECG Explanations: SHAP-driven Counterfactuals for Multivariate Time-series Multi-class Classification". In: *Information Systems Frontiers* (Mar. 2026). ISSN: 1387-3326, 1572-9419. DOI: 10.1007/s10796-026-10711-9. URL: https://link.springer.com/10.1007/s10796-026-10711-9.

[J2] Tomasz Szymon Szczepanski, Petter Moe Omland, Øystein Dunker, Trond Sand, Martijn Tannemaat, Robert Reijntjes, Anis Yazidi, Kerstin Bach, John Anker Zwart, Joe Jabre, and Kristian Bernhard Nilsen. "Deriving reference limits from historical data: A comparison of four novel methods". In: *Clinical Neurophysiology* 182 (Jan. 2026), p. 2111451. DOI: 10.1016/j.clinph.2025.2111451. URL: https://doi.org/10.1016/j.clinph.2025.2111451.

[J3] Betül Bayrak and Kerstin Bach. "PerCE: Hierarchical Perturbation-Based Counterfactual Explanations for Multivariate Time Series Classification". In: *IEEE Access* 13 (2025), pp. 205076–205085. DOI: 10.1109/access.2025.3639125. URL: https://doi.org/10.1109/access.2025.3639125.

[J4] Rayane Haddadj, Anne Lovise Nordstoga, Tom Ivar Lund Nilsen, Eivind Schjelderup Skarpsno, Atle Kongsvold, Mats Flaaten, Jasper Schipperijn, Kerstin Bach, and Paul Jarle Mork. "Volume and Intensity of Walking and Risk of Chronic Low Back Pain". In: *JAMA Network Open* 8.6 (2025), e2515592–e2515592.

[J5] Marian ZM Hurmuz, Stephanie M. Jansen-Kosterink, Paul Jarle Mork, Kerstin Bach, and Hermie J. Hermens. "Factors influencing the use of an artificial intelligence-based app (selfBACK) for tailored self-management support among adults with neck and/or low back pain". In: *Disability and rehabilitation* 47.4 (2025), pp. 958–967. DOI: https://doi.org/10.1080/09638288.2024.2361811. URL: https://www.tandfonline.com/doi/full/10.1080/09638288.2024.2361811.

[J6] Atle Kongsvold, Mats Flaaten, Eivind Schjelderup Skarpsno, Aleksej Logacjov, Kerstin Bach, Tom Ivar Lund Nilsen, and Paul Jarle Mork. "Contribution of walking, running and cycling to moderate-to-vigorous and total physical activity in adolescents and adults across and within seasons: cross-sectional data from the Norwegian HUNT Study". In: *BMJ Open Sport & Exercise Medicine* 11.4 (2025).

[J7] Atle Kongsvold, Eivind Schjelderup Skarpsno, Mats Flaaten, Aleksej Logacjov, Kerstin Bach, Tom Ivar Lund Nilsen, and Paul Jarle Mork. "Associations of sport and exercise participation in adolescence with body composition and device-measured physical activity in adulthood: longitudinal data from the Norwegian HUNT study — International Journal of Behavioral Nutrition and Physical Activity". In: *International Journal of Behavioral Nutrition and Physical Activity* 22.29 (2025). DOI: https://doi.org/10.1186/s12966-025-01726-7. URL: https://link.springer.com/article/10.1186/s12966-025-01726-7.

[J8] Aleksej Logacjov, Kerstin Bach, and Paul Jarle Mork. "Long-term self-supervised learning for accelerometer-based sleep–wake recognition". In: *Engineering Applications of Artificial Intelligence* 141 (Feb. 2025), p. 109758. ISSN: 0952-1976. DOI: 10.1016/j.engappai.2024.109758. URL: https://www.sciencedirect.com/science/article/pii/S0952197624019171.

[J9] Aleksej Logacjov, Tonje Pedersen Ludvigsen, Kerstin Bach, Atle Kongsvold, Mats Flaaten, Tom Ivar Lund Nilsen, and Paul Jarle Mork. "The performance of a machine learning model in predicting accelerometer-derived walking speed". In: *Heliyon* 11.2 (2025).

[J10] Tomasz Szymon Szczepanski, Petter Moe Omland, Øystein Dunker, Trond Sand, Martijn Tannemaat, Robert Reijntjes, Anis Yazidi, Kerstin Bach, John Anker Zwart, Joe Jabre, et al. "Deriving reference limits from historical data–A comparison of four novel methods". In: *Clinical Neurophysiology* (2025), p. 2111451.

[J11] Betül Bayrak and Kerstin Bach. "Evaluation of Instance-based Explanations: An In-depth Analysis of Counterfactual Evaluation Metrics, Challenges, and the CEval Toolkit". In: *IEEE Access* (Jan. 2024).

[J12] Fredrik Granviken, Ottar Vasseljen, Kerstin Bach, Amar Jaiswal, Ingebrigt Meisingset, et al. "Decision Support for Managing Common Musculoskeletal Pain Disorders: Development of a Case-Based Reasoning Application". In: *JMIR Formative Research* 8.1 (Jan. 2024), e44805.

[J13] Marian ZM Hurmuz, Stephanie M. Jansen-Kosterink, P. J. Mork, K. Bach, and Hermie J. Hermens. "Factors influencing the use of an artificial intelligence-based app (selfBACK) for tailored

self-management support among adults with neck and/or low back pain". In: *Disability and Rehabilitation* (Jan. 2024), pp. 1–10.

[J14] Aleksej Logacjov and Kerstin Bach. "Self-supervised learning with randomized cross-sensor masked reconstruction for human activity recognition". In: *Engineering Applications of Artificial Intelligence* 128 (Jan. 2024), p. 107478.

[J15] Aleksej Logacjov, Sverre Herland, Astrid Ustad, and Kerstin Bach. "SelfPAB: large-scale pre-training on accelerometer data for human activity recognition". In: *Applied Intelligence* (Jan. 2024), pp. 1–19.

[J16] Aleksej Logacjov, Eivind Schjelderup Skarpsno, Atle Kongsvold, Kerstin Bach, and Paul Jarle Mork. "A Machine Learning Model for Predicting Sleep and Wakefulness Based on Accelerometry, Skin Temperature and Contextual Information". In: *Nature and Science of Sleep* (Jan. 2024), pp. 699–710.

[J17] Anna Marcuzzi, Nina Elisabeth Klevanger, Lene Aasdahl, Sigmund Gismervik, Kerstin Bach, Paul Jarle Mork, and Anne Lovise Nordstoga. "An Artificial Intelligence–Based App for Self-Management of Low Back and Neck Pain in Specialist Care: Process Evaluation From a Randomized Clinical Trial". In: *JMIR Human Factors* 11 (Jan. 2024), e55716.

[J18] Abdulmajid Murad, Frank Alexander Kraemer, Kerstin Bach, and Gavin Taylor. "Uncertainty-aware autonomous sensing with deep reinforcement learning". In: *Future Generation Computer Systems* (Jan. 2024).

[J19] Fredrik Granviken, Ingebrigt Meisingset, Ottar Vasseljen, Kerstin Bach, Anita Formo Bones, and Nina Elisabeth Klevanger. "Acceptance and use of a clinical decision support system in musculoskeletal pain disorders–the SupportPrim project". In: *BMC Medical Informatics and Decision Making* 23.1 (Jan. 2023), p. 293.

[J20] Atle Kongsvold, Mats Flaaten, Aleksej Logacjov, Eivind Schjelderup Skarpsno, Kerstin Bach, Tom Ivar Lund Nilsen, and Paul Jarle Mork. "Can the bias of self-reported sitting time be corrected? A statistical model validation study based on data from 23 993 adults in the Norwegian HUNT study". In: *International Journal of Behavioral Nutrition and Physical Activity* 20.1 (Jan. 2023), p. 139.

[J21] Atle Kongsvold, Mats Flaaten, Aleksej Logacjov, Eivind Schjelderup Skarpsno, Kerstin Bach, Tom Ivar Lund Nilsen, and Paul Jarle Mork. "Correction: Can the bias of self-reported sitting time be corrected? A statistical model validation study based on data from 23 993 adults in the Norwegian HUNT study". In: *The International Journal of Behavioral Nutrition and Physical Activity* 20 (Jan. 2023).

[J22] Frank Alexander Kraemer, Hafiz Areeb Asad, Kerstin Bach, and Christian Renner. "Online machine learning for 1-day-ahead prediction of indoor photovoltaic energy". In: *IEEE access* (Jan. 2023).

[J23] Lars Christian Naterstad Lervik, Ottar Vasseljen, Bjarne Austad, Kerstin Bach, Anita Formo Bones, Fredrik Granviken, Jonathan C. Hill, Pål Jørgensen, Torbjørn Øien, Paola Marin Veites, et al. "SupportPrim—a computerized clinical decision support system for stratified care for patients with musculoskeletal pain complaints in general practice: study protocol for a randomized controlled trial". In: *Trials* 24.1 (Jan. 2023), p. 267.

[J24] Anna Marcuzzi, Anne Lovise Nordstoga, Kerstin Bach, Lene Aasdahl, Tom Ivar Lund Nilsen, Ellen Marie Bardal, Nora Østbø Boldermo, Gro Falkener Bertheussen, Gunn Hege Marchand, Sigmund Gismervik, et al. "Effect of an Artificial Intelligence–Based Self-Management App on Musculoskeletal Health in Patients With Neck and/or Low Back Pain Referred to Specialist Care: A Randomized Clinical Trial". In: *JAMA Network Open* 6.6 (Jan. 2023), e2320400–e2320400.

[J25] Astrid Ustad, Aleksej Logacjov, Stine Øverengen Trollebø, Pernille Thingstad, Beatrix Vereijken, Kerstin Bach, and Nina Skjæret Maroni. "Validation of an activity type recognition model classifying daily physical behavior in older adults: the HAR70+ model". In: *Sensors* 23.5 (Jan. 2023), p. 2368.

[J26] Tiago Veiga, Hafiz Areeb Asad, Frank Alexander Kraemer, and Kerstin Bach. "Towards containerized, reuse-oriented AI deployment platforms for cognitive IoT applications". In: *Future Generation Computer Systems* 142 (Jan. 2023), pp. 4–13.

[J27] Deepika Verma, Kerstin Bach, and Paul Jarle Mork. "External validation of prediction models for patient-reported outcome measurements collected using the selfBACK mobile app". In: *International Journal of Medical Informatics* 170 (Jan. 2023), p. 104936.

[J28] Kerstin Bach, Atle Kongsvold, Hilde Bårdstu, Ellen Marie Bardal, Håkon S. Kjærnli, Sverre Herland, Aleksej Logacjov, and Paul Jarle Mork. "A Machine Learning Classifier for Detection of Physical

Activity Types and Postures During Free-Living". In: *Journal for the Measurement of Physical Behaviour* 5.1 (Dec. 2022), pp. 24–31. DOI: 10.1123/jmpb.2021-0015. URL: https://journals.humankinetics.com/view/journals/jmpb/5/1/article-p24.xml.

[J29] Deepika Verma, Duncan Jansen, Kerstin Bach, Mannes Poel, Paul Jarle Mork, and Wendy Oude Nijeweme d'Hollosy. "Exploratory application of machine learning methods on patient reported data in the development of supervised models for predicting outcomes". In: *BMC medical informatics and decision making* 22.1 (Jan. 2022), p. 227. DOI: https://doi.org/10.1186/s12911-022-01973-9.

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