

Utvalg:	Forskningsutvalget	Dato: 19.06.2024
FU-sak: 25/24		Arkivsaknr.:

KI-sentre, skisser fra UiB

Bakgrunn

Forskningsutvalget ble orientert om «KI-milliarden» på møtet 21. februar, [sak 07/24](#), og diskuterte videre prosess rundt UiBs initiativer til KI-sentre på møtet 8. mai, sak 12/24. Utlysningen er todelt: først en femsiders skisse, som hadde frist 7. juni, og så en hovedutlysning med frist 15. januar 2025. Det var obligatorisk å sende inn skisse dersom en skal levere full senterøknad.

Ni KI-senterskisser fra UiB

Det ble sendt inn ni skisser om å koordinere senter fra UiB (se vedlegget). De fleste av disse har med fagmiljøer fra minst ett annet fakultet på UiB. I tillegg er et ukjent antall UiB-miljøer med på skisser/senterinitiativer fra andre institusjoner; vi vil vite mer om disse når Forskningsrådet offentliggjør alle de innkomne skissesammendragene – de har antydnet innen fredag 21. juni.

FIA har invitert kontaktpersonene for de ni initiativene, samt deres instituttledere og støtteapparat, til en samling rett før sommeren, for å komme i gang med konsolidering av skisser/konsortier.

Til orientering i FU

Saken legges fram for forskningsutvalget til orientering.

Vedlegg: skisser for KI-sentre fra UiB

1. AI Centre for Empowerment of Human Learning (AI-LEARN)

Contact: Barbara Wasson, SLATE, PSY

AI-LEARN takes an interdisciplinary approach to address the opportunities, challenges, and risks associated with the use of AI for the empowerment of human learning. The recent access to AI powered tools is transforming the way humans learn and work and has had a profound and far-reaching impact on educational institutions, workplaces, and society. To unleash AI's full potential ethically and responsibly for learning, work, and digital citizenry, it is crucial to approach its development and use with caution and critically evaluate its strengths, limitations, and impact by considering technical, practical, pedagogical, ethical, and regulatory and legal challenges. AI-LEARN draws on foundational & applied research and innovation with a diversity of stakeholders to lay the foundations for responsible, trustworthy, and sustainable AI solutions for the empowerment of human learning in diverse contexts.

2. SAIF- Centre for Sustainable AI Research Futures

Contact: Inge Jonassen (Inst. for informatikk, MN), Marija Slavkovic (Info- og medievitenskap, SV)

The Center for Sustainable Artificial Intelligence Futures (SAIF) will advance foundational AI research by addressing theoretical gaps that hinder progress in technology and understanding of societal impacts. Focusing on six areas—uncertainty, algorithms, interoperability, agency, alignment, and hype—SAIF will develop methodologies for sustainable AI advancements. As the international AI research hub in Norway, SAIF will leverage Norway's efficient social structure and trustworthy governance to influence global AI development. The center will integrate theoretical expertise with practical applications, fostering interdisciplinary collaboration and knowledge dissemination. Emphasizing long-term human-centered research, SAIF contributes to robust technological innovation and societal well-being. SAIF will enhance Norway's AI research capacity, attract international talent, and educate future Norwegian AI experts through innovative programs.

3. Digital Learning Communities Artificial Intelligence Centre (DLCAIC)

Contact: Rune Johan Krumsvik, Inst for pedagogikk, PSY

Forskningstiljøet bak denne søknaden har siden 2015 drevet KI-forskning og den overordnede målsettingen med senteret vil være å videreføre denne KI-forskningen innen læring, forskerutdanning og psykisk helse innen utdanning og helsesektoren. Senteret vil særlig være tematisk innrettet mot forskningsmetodisk innovasjon og anvendelse av kunstig intelligens (KI) innen helse og utdanning, samt hvordan KI-genererte innovasjoner og innovativ forskning på KI kan bidra inn mot omstillingen UH-sektoren står foran i de kommende årene. Senteret vil også adressere hvordan unge og voksnes digitale kompetanse kan medvirke til en bredere forståelse av sammenhengen mellom KI, sosiale medier og psykisk (u)helse, samt hvordan KI kan sementere eller bryte ned digitale skiller og digitalt utenforskap i befolkningen. Senteret vil være et nasjonalt tverrfaglig, tverrsektorielt og tverrinstitusjonelt forskningssenter og bidra til å styrke KI-forskningens' samfunnskonsekvenser.

4. Centre for AI Ethics, Aesthetics and Creative Human Operations (CAIEAC)

Contact: Frans Jacobi, KMD

Center for AI Ethics, Aesthetics and Creative Human Operations (CAIEAC) aims to reimagine the integration of artificial intelligence in creative human operations and to challenge hegemonial AI tropes. By moving beyond the binary of utopian and dystopian paradigms, our center embraces a "Prototopian" model that envisions continuous improvement in adjusting AI technologies to society. The center will foster innovative and critical approaches to AI, focusing on computational aesthetics, the expansion of creativity through human-machine collaboration, and the development of new conceptual frameworks informed by art, media theory, and interdisciplinary research. The center will foster a reflective and inclusive AI landscape that integrates ethical considerations, addresses biases, and promotes decolonial and indigenous knowledge into different AI infrastructures for a culturally diverse society.

5. Reliable and Responsible AI Solutions for Environmental challenges (RAISE-UP)

Contact: Stefan Sobolowski, Geofysisk institutt, MN

Norway faces challenges arising from the physical impacts of climate change, risks associated with the shift to a low carbon society and the effects on the Norwegian economy. RAISE will address these challenges by leveraging recent AI advances in weather, climate & environmental monitoring and forecasting. By incorporating physical knowledge into custom AI-based algorithms, RAISE will develop applications to monitor critical ecosystems, predict the future evolution of the coupled earth system, and develop innovative products and services that assess impacts, mitigate risks, and enable action. Importantly, RAISE will target chat-based applications that democratize and diversify knowledge sharing and usher in a new era of accessible environmental information for the public and private sectors as well as society at large.

6. Center for Medical Artificial Intelligence Bergen

Contact: Helge Ræder, Klinisk institutt 1, MED

The Center for Medical Artificial Intelligence Bergen aims to improve healthcare and quality of life through AI. It focuses on both healthy individuals and patients, integrating AI in diagnostics, personalized medicine, workflow optimization, and chronic disease management. The center collaborates with various institutions and health industry partners to leverage data from multiple sources, ensuring secure analysis and integration for enhanced healthcare services. Key research goals include enhancing diagnostic accuracy, developing personalized treatment plans, optimizing healthcare workflows, and ensuring ethical AI use. The center also emphasizes education and skills development, aiming to boost innovation and create new AI-driven healthcare solutions. With robust management, interdisciplinary collaboration, and a focus on scalability and privacy, the center strives to transform healthcare delivery and patient outcomes.

7. Insight: New AI Methods for Innovative Use of Public Documents

Contact: Andreas Opdahl, Institutt for informasjons- og medievitenskap, SV

The centre will develop and evaluate new AI techniques for parallel symbolic (such as knowledge graphs) and sub-symbolic (such as large language and multimedia models) representation and reasoning with applications to innovative uses of public documents in sectors such as local journalism, local governance, research and archives. The centre will also conduct interdisciplinary AI and social-science research to investigate challenges and opportunities of AI in context of legitimacy, trust, privacy, and other legal and ethical considerations. The centre will build on AI and societal research to develop, implement and evaluate new prototype systems and services in collaboration with its application and technology partners. The centre will also emphasise researcher education and competence building.

8. Centre for AI-Driven Molecular Solutions (AIMS)

Contact: Vidar Remi Jensen, Institutt for kjemi, MN

The development of AI-based models for molecular discovery has tended to be a theoretical and computational endeavour weakly connected to reality. In fact, most of these tools have not been experimentally verified, and lack true utility in discovery. Many are also “black boxes” from which extraction of relationships between the structure and properties of molecules is hard. AIMS will, by developing methodology based on causal AI and by training and validating these tools using highthroughput (HT) experimentation and high-fidelity molecular modelling, overcome these limitations and deliver AI-based tools of true utility in molecular discovery. Showcase early applications will include bioactive compounds and catalysts. The IPR-related and societal consequences of the AI-driven technology and innovations will be investigated, making AIMS a highly interdisciplinary centre covering three tracks: technology and innovation as well as their consequences.

9. ANeED Research Centre for AI-driven cognitive augmentation, clinical decision support and human-AI interaction

Contact: Miroslav Bachinski, Institutt for informasjons- og medievitenskap, SV

The ANeED Research Centre for AI-driven cognitive augmentation, clinical decision support and human-AI

interaction aims to design, develop, and apply AI tools to augment humans with additional cognitive abilities. Such tools will open new ways to support effective and efficient handling of complex tasks, going beyond the capabilities of an individual. Cognitive augmentation will include highly interactive multimodal AI systems with a shared understanding of the user's context and objectives. These systems will give users

“superpowers” by making their decision process more effective, efficient and accurate, particularly in complex decision tasks. The research domain of the Research Centre will be in the medical context on clinical decision support for doctors, health workers, and primary family caregivers, as well as assistance for patients affected by neurodegenerative diseases (e.g., dementia) in their independence and everyday tasks in all stages of the disease and their abilities to maintain contact to other people to reduce loneliness.