Alva Markelius - Curriculum Vitae

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EDUCATION:

University of Cambridge, Lucy Cavendish College   **Cambridge, UK (2022 - present)**
AI Ethics & Society Master of Studies
- Part time master studies with a main interest in social AI and robotics, emotion recognition AI, technology policy, intercultural AI narratives, AI geopolitics and human rights impacted by AI.

Seoul National University   **Seoul, S. Korea (2021 - 2022)**
Exchange year (Artificial Intelligence)
- GPA 4.12 (Equivalence of First Class Honours classification).
- Relevant coursework: Affective Science, Psychology and Human-AI Interaction, Interdisciplinary approaches to AI: Methods in Explainable AI and AI and Labour Economics and Cognitive Neuroscience.

University of Gothenburg   **Gothenburg, Sweden (2019 - 2022)**
Cognitive Science Bachelor Degree
- GPA 3.8 (Equivalence of First Class Honours classification).
- Board member Cognitive Science Student Association.
- Completed thesis as part of international research project with Koç University in Türkyie; *Differential Outcomes Training of Visuospatial Memory: A Gamified Approach Using a Socially Assistive Robot.*

WORK EXPERIENCE:

AI Lab Sweden AB   **Stockholm, Sweden (2022 - present)**
AI and Robotics Ethics Consultant
- Consulting clients about ethical approaches to AI innovation, development and deployment in light of current and relevant regulations, frameworks and principles for responsible AI. Focus on diversity, inclusion and responsible AI.
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Brain+/DICE Lab, University of Gothenburg   **Remote/Gothenburg (2022 - present)**
Commissioned Researcher
- Part of STINT initiation grant funded project between the University of Gothenburg and Koç University researching humanoid social robotics, affective computing and digitalised cognitive interventions.
- Researching human/robot interaction and gamified therapeutics for cognitive interventions for Danish Brain+.

RECOG-AI Leverhulme Centre for the Future of Intelligence   **Cambridge, UK (2022 - 2023)**
Research Assistant
- Research assistant in the Kinds of Intelligence project RECOG-AI specifically aimed at a robust conceptual and methodological framework for benchmarking evaluation of cognitive capabilities and generality in AI.
- Specifically worked with task development for training AI agents in a novel and unique cognitive approach for learning affordances and object understanding.

Swedish AI Fund - AICenter   **Remote (2022 - 2023)**
Project Manager
- Moderated a and led a program involving the distribution of 100 million SEK for financial aid, grants, and scholarships globally to those involved in the AI industry for equality, safety, and security.

Human Factors Psychology Lab, Seoul National University   **Seoul, S. Korea (2021 - 2022)**
Robotics Research Assistant
- Collaborated with an international and interdisciplinary cohort and assisted research in affective human/robot interaction, applied cognitive psychology, UI/UX, social robotics and VR.
- Active member of academic skill workshop. Demonstrated usage of Furhat robot design social interface and acquired field-relevant academic presentation and discussion skills.

University of Gothenburg   **Gothenburg, Sweden (2022 - 2023)**
Teacher assistant and lecturer: AI/Machine Learning/Affective Science
- Taught and lectured on e.g. explainable AI at the course Machine Learning and Data Analysis. Practical assistance with programming and marking.
- Teaching assistant and responsible for organising and carrying out inter-university program Mechanism of Emotion, focusing on theory of emotion and affective computing methodology with University of Warwick.

EXTRACURRICULAR AND VOLUNTEER WORK

Cambridge AI Ethics Society   **Cambridge, UK (2022 - present)**
President (previously Secretary and Events Coordinator)
- President of a student run society aimed at spreading awareness on the social and political effects of technology.

EU Joint Programme – Neurodegenerative Disease Research Network   **Remote/Gothenburg (2022 - present)**
Network and Program Organiser and Researcher
- Granted project which includes a network of researchers aimed to explore the possibilities of using technology and digital tools for implementation of cognitive training including differential outcomes training and attentional control.

IEEE International Conference on Robot and Human Interactive Communication   **Busan, S. Korea (2023)**
Special Session Chair and Associate Editor
- Organiser and Chair of special session SARCHA: Socially-Assistive Robots in Clinical and Healthcare Applications and responsible as associate editor and reviewer for robotics conference articles

AI Ethics & Society Cambridge Delegation to Nairobi   **Nairobi, Kenya (2023)**
Delegate
- Part of delegation of Cambridge AI Ethics students to learn about the promises and potential pitfalls of AI governance and development in Kenya and East Africa by engaging with i.e. Kenyan government, Microsoft, IBM and British Commission and Lawyer´s Hub

ETIS Laboratory CY Cergy Paris Université   **Paris, France (2022)**
Research Assistant
- Recipient of the EUTOPIA EURSS research scholarship to visit and conduct research at human/robot interaction lab at CY Cergy Université.

Cambridge AI Safety Hub Fellowship   **Cambridge, UK (2022)**
Fellowship Participant
- Fellow in reading and discussion group on e.g. neural network interpretability, AI capabilities and generality.

International Summer School on AI and Games   **Online (2022)**
Participant
- Accelerated technical ability and theory in the background and key techniques for AI in games.

UN Climate Change Conference   **Paris, France (2015)**
Representative and Program Manager
- Representative for the association Nature and Youth Sweden at the UN Climate Change Conference (COP21) in Paris.

AWARDS

Nova 111 Student List 2023 - one of the 111 young people with most potential in Sweden (Mathematics, Data, and Analytics)

INVITED TALKS

Microsoft Share & Evolve Sweden – *AI Ethics and Responsibility*   **Stockholm (2023)**
Oxbridge Robotics Summer School – *Robotics and Ethics*   **Cambridge (2023)**
EQUALS EU – *Whose Digital Future? Gender, Rights, Inclusion, and Exclusion*   **Geneva (2023)**
Nordic China Startup Forum – *AI Trends, Business and Female Leadership*   **Online (2022)**
Science Festival Gothenburg – *AI, Robotics and Science Fiction*   **Gothenburg (2020)**
Climate Parliament, Stockholm University – *AI, Climate Change and Science Fiction*   **Stockholm (2018)**

MISCELLANEOUS

Software abilities: Proficient with Microsoft Office and IBM SPSS as well as computer programming (Python, R, Matlab, LaTex) and machine learning (Tensorflow, SKLearn, Shap, Lime). Experience with iMotions and Unity.

Skills: Experienced critical and creative thinker and a fast learner. Proficient in project leadership and management with keen attention to detail. Well-rounded skill set in qualitative and quantitative research design and analytics. Recognised for enthusiastic work-ethics, collaboration and noteworthy written and verbal communication skills.

Languages: English (Fluent, IELTS 8.5), Swedish (Native), German (Fluent), Korean (Beginner).

PUBLICATIONS

Markelius, A., Sjöberg, S., Lemhauori, Z., Cohen, L., Bergström, M., Lowe, R., Cañamero, L., (2023), A Human-Robot Mutual Learning System with Affect-Grounded Language Acquisition and Differential Outcomes Training. *International Conference on Social Robotics 2023*.

Markelius, A., Sjöberg, S., Bergström, M., Ravandi, B.S., Vivas, A.B., Khan, I., Lowe, R.: (2023), Differential Outcomes Training of Visuospatial Memory: A Gamified Approach Using a Socially Assistive Robot. *Under revision to International Journal of Social Robotics*.

Chan, A., Salganik, R., **Markelius, A.**, Pang, C., Rajkumar, N., Krasheninnikov, D., ... & Maharaj, T. (2023, June). Harms from Increasingly Agentic Algorithmic Systems. In *Proceedings of the 2023 ACM Conference on Fairness, Accountability, and Transparency* (pp. 651-666).

Upcoming 2023:

Rutar, D., **Markelius, A.**, Schellaert, W., Burnell, R., Burden, J., Voudouris, K., Cheke, L., & Hernández-Orallo, J. (2023), Robust Evaluation of Affordance Understanding in Artificial Agents, *Unsubmitted manuscript.*

Markelius, A., Wright, Connor. (2023) The Mechanisms of AI hype and its Planetary and Social Costs, *Submitted manuscript to Topical Collection on The Ethical Implications of AI Hype: Examining the overinflation and misrepresentation of AI capabilities and performance*