Surfing on brainwaves: Current neurotechnology trends (and how I learnt them)

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Abstract

The talk will focus on presenting various trends in the field of neurotechnology. It will introduce multiple examples of the most recent innovations from both academia and industry, and use them to illustrate current and future directions of development in neurotechnology, in particular related to brain-computer interfaces and neuroimaging. These will include technical topics, but also other important emerging areas of research such as ethics of 'mind-reading'. The talk will mention possible opportunities for further development available for Biomedical Engineering students and graduates. It will be partially based on the lecturer's career as an example. There will be time for questions from the audience at the end of the lecture.

About the presenter

Hanna Nowicka is a final year DPhil (PhD) student at University of Oxford, UK. Her research focuses on methods development for neuroimaging, in particular human brain MRI in neurodegenerative diseases and ageing. In 2020, she worked as an AI Resident at X Moonshot Factory (Google) in Silicon Valley contributing to Project Amber — an early stage mental health moonshot using machine learning and EEG data for finding biomarkers for depression. Previously, she has completed the Bachelors in Biomedical Engineering at Wrocław University of Science and Technology, Poland. During her undergraduate studies, she has already gained international research experience at top institutions in Poland, Australia, Germany, and Switzerland. Hanna is passionate about using innovations in medical technologies to improve everyone's health, both physical and mental. She is a recipient of several awards including the Clarendon Scholarship for 1% of the best University of Oxford students and the Forbes 30 under 30 list in Poland.