September 11

Tuesday

Colloquium

Faculty of Computer Science, HSE

Joseph MacInnes

Head of vision modelling lab / HSE

Computational cognitive neuroscience: A brief primer

Computational models in psychology and neuroscience share many algorithms with machine learning, machine vision and artificial intelligence, but the focus of the research is different. Where applied fields try to create algorithms that solve or automate a specific problem, computational modelling uses these algorithms to better understand fundamental workings of human brain and cognition. Rather than optimizing a new process, we try to simulate and understand an existing process. While computational modelling is still a growing field, there have emerged a number of contenders that perform very well in simulating various neural and cognitive processes. Diffusion models of decision making, salience models of vision and more recently deep learning models of object classification have all shown promise on their respective tasks. This talk will give an overview of a number of these models and discuss possible points of overlap with computer science and cognitive psychology.

September 11, 18.10–19.30
Kochnovskii proezd, 3, room 205

Register at https://cs.hse.ru/en/colloquium