How should we approach the development of cyber-policy and infrastructure given the "short arm" of predictive knowledge?

Amy Lawson-Gunkel

24 November 2019

Details

When moving forward in developing cyber policy and infrastructure, the cyber community must take into consideration the factors of predictive knowledge. In order to appropriately create these policies, one must understand the definition of predictive knowledge. The University of Alberta defines predictive knowledge best stating that, "Predictive Knowledge (PK) is a group of approaches to machine perception and knowledgeability using large collections of predictions made online in real-time through interaction with the environment" (Ualberta.ca).

Unfortunately, predictive knowledge will never be on par with technical knowledge; which bears the issues of a lack of ethics when creating policies and developing infrastructure. An ethical approach should be taken when a new policy emerges, or an old policy is being adapted to accommodate the modernity of technology. When discussing the ethical development of a policy, a few notions that should be taken into consideration such as: political ideologies, social aspects, legalities, scientific stances and economic concepts.

A benefit to utilizing predictive knowledge, is that it is a "scalable way to update and verify an agent's representation of the world…" (ualberta.ca). This scalability requires the user to possess an extensive amount of domain knowledge. These systems are designed to be used in a continual learning environment, it is a general expectation of predictive knowledge to absorb information throughout the duration of its placement. At this point predictive learning is a subject to be thoroughly explored, while also taking into consideration the ethical effects it has toward it's users.

References

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