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CS 460: Intro to Robotics
Dr. Crawford
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Joint Lecture: My Takeaway

Many research projects suffer from what could be called tunnel-vision, over-specialization, or any other categorization referring to the phenomenon wherein new, exciting discoveries made in research projects fail to generalize quickly, or well, to real situations. In this discussion, Dr. Chris Crawford and Dr. Darrin Griffin aimed to move past this limitation and speak on the ways in which expertise and consideration from separate fields must be applied to solve serious problems, namely the fields of computer science and communication.

Dr. Crawford, a former Computer Science student himself, spoke on his fascinating research into brain-computer interfacing (BCI), which is concerned with the interaction between humans and computing devices. Particularly, Dr. Crawford spoke about the use of non-invasive methods to gather information about humans, and about how much of his focus as a researcher has been centered around garnering attention and interest into robotics and BCIs, which is more generally concerned with making the user experience (UX) of such technologies better. Crucially, virtually all of the operations and functions performed by computers require human interaction and intervention, so understanding the interaction between humans and computers is of paramount importance. Dr. Griffin, a researcher in communications studies, and more specifically non-verbal communication, spoke on his research into the various subfields of communication. Dr. Griffin's research is concerned with non-verbal communication, deception, and deafness, and from a computational standpoint, his insights were astounding.

In the latter portion of the conversation, Dr. Griffin and Dr. Crawford spoke on the topic of deception, where its bases lie, how its functionality is different between human-human interaction, human-computer interaction, and computer-computer interaction. One of the most interesting topics discussed was the origin of human intelligence, and how those origins affected human reasoning, and more fundamentally, voluntary and involuntary response to stimuli. I posed a few questions regarding the popular "nature vs. nurture" debate, and how that may affect the future development of generally artificially intelligent systems. If the "tabula rasa" argument that human intelligence is simply a blank slate upon birth, then perhaps human reasoning can be deduced from the inside-out with sufficiently comprehensive computational models of the human brain, rather than the comparatively inefficient practice of treating the brain largely as a black box, where researchers attempt to make deductions based not upon the physical structure and functionality of the brain itself, but on hypotheses inferred from observed patterns of output for given input stimuli.

This talk was a fantastic conversation between two incredibly passionate, inspiring, and knowledgeable individuals, and I've learned a lot from it.