Dear USPTO

On the subject above, I believe given the Alice precedence and the need for a patent to be non-obvious, useful, novel, and subject-matter eligible, the AI must be explainable in procedural fashion; i.e. reduced to a layman-describable process. An example is the structural representation of AlexNet, which shows the processes by which the incoming data is treated. This makes it relatively simple to determine if another, perhaps competing, algorithm is based on the same architecture, or a new one. That seems in keeping with the requirements for patentable material, as here we view the specific processes, which can be reduced to different operations in software, firmware, or hardware, as discoverable and thus defensible.

In contrast, training AlexNet to respond to a specific class of input should not be patentable since the training output is "emergent" from the architecture and given the many hundreds of millions of connections, is not guaranteed (in fact, quite the opposite) to be the global "optimum" for the network.

Best regards

Steve Simske
Professor, Systems Engineering
Colorado State University