

[0011a] In another aspect, there is provided a system comprising at least one memory for storing computer-executable instructions and at least one processing unit for executing the instructions stored on the memory. Execution of the instructions programs the at least one processing unit to perform operations comprising: emitting, using an audio output component of a user device, one or more audio signals; receiving, using an audio input component of the user device, one or more reflections of the audio signals off a target; determining, based on the one or more reflections, whether the target comprises at least one of a face-like structure and face-like tissue; and determining whether the target is a spoof based at least in part of the determination of whether the target comprises at least one of a face-like structure and face-like tissue.

[0011b] In another aspect, there is provided a non-transitory computer-readable medium having instructions stored thereon that, when executed, program at least one processor to perform operations comprising: emitting, using an audio output component of a user device, one or more audio signals; receiving, using an audio input component of the user device, one or more reflections of the audio signals off a target; determining, based on the one or more reflections, whether the target comprises at least one of a face-like structure and face-like tissue; and determining whether the target is a spoof based at least in part of the determination of whether the target comprises at least one of a face-like structure and face-like tissue.