**Project Janus**

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**Abstract**

The development goal of Project Janus is to design, fabricate, and program two robotic heads that can serve as animatronic chatbots. Each robotic head will be equipped with two USB webcams, a mono speaker within the robot’s mouth, and a pair of microphones. Additionally, each robotic head will feature a three degree of freedom neck, a one degree-of-freedom jaw, and a two degree-of-freedom gimbal for the eyes upon which the cameras will be mounted. The robotic heads will be interfaced to separate internet connected personal computers. Through these computers, they will make use of online speech recognition tools, online chatbots, and online text-to-speech converters. The two robotic heads will serve two purposes. The first purpose will be to study human-robot-robot learning. Currently, most chatbots learn from human users. Project Janus seeks to find out if chatbots can learn from other chatbots which, perhaps, learn from human users. Not only do we seek to find out if this is possible, but we also seek to determine the similarity of the two robots’ memories after lengthy conversations. The second purpose that the two robotic heads will serve is that of interactive display/recruiting tools for the ERAU Space Robotics Laboratory. Through software tools such as AIML, we will be able to create responses for questions that are likely to be asked by tour groups and visitors to the Space Robotics Laboratory.