The increasing popularity of medical robotics systems in the last three decades has caused the use of surgical navigation and image-guided therapy to increase as well. Using surgical navigation systems to execute predefined plans on imaging has already been done clinically for many common surgical procedures. Due to image guided robotics being an emerging area of research, there has been a need to combine medical imaging techniques with robotics systems, especially with open-source tools for increased accessibility. The proposed thesis project will be to combine a Franka robot with 3D Slicer which is an image-guidance software for medical images. The surgical robotics system will require image processing and visualization for surgical planning as well as kinematics and motion planning for robot control. The main software development tool that will be used for robotics is the robot operating system (ROS), an open source robotics control software. ROS already includes features useful for medical robotics including kinematics, simulation and motion planning. Software development will be done using the recent ROS2 release. The ROS-IGTL bridge, which is a message communication channel between 3D Slicer and the robot controller software ROS, will need to be implemented using a communication protocol called OpenIGTLink. In order to fill AI minor requirements, an AI related component of the project is planned after successfully implementing the surgical robotics system. Possible ideas include camera-based detection of anatomical or artificial landmarks for registration, a reinforcement learning based method to move the robot, and decision making for robot-based procedure.