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| --- | --- |
| Roles of Team Members | |
| Names | Roles |
| Jinling Qiu (Leader) | * Mechanical Part (connect work station to the robot) * Streaming transfer, robot control * Evaluation and test the model * Presentation Preparation |
| Yanrui Lee | * Code Reproduction * Transferring model from Pytorch to Universal platform * Evaluation and test the model * Presentation Preparation |
| Yulin Huang | * Code Reproduction * Transferring model from Pytorch to Universal platform * Evaluation and test the model * Presentation Preparation |
| Leen AlShelh | * Code Reproduction * Transferring model from Pytorch to Universal platform * Evaluation and test the model * Presentation Preparation |
| Jie Li | * Mechanical Part (connect work station to the robot) * Streaming transfer, robot control * Evaluation and test the model * Presentation Preparation |

Minimally invasive surgery (MIS) has expanded significantly in modern medicine, driven by advancements in robotics and technology. MIS involves a surgeon using elongated instruments and a surgical camera inserted through small incisions, resulting in reduced trauma to the patient compared to open surgery (mcafee2010minimally, allan20183). Research indicates that MIS often leads to better outcomes, such as shorter patient recovery times and increased surgical efficiency (mcafee2010minimally). However, MIS is also limited by factors such as reduced tactile feedback and depth perception, which can complicate the surgeon’s tool manipulation and contribute to increased cognitive workload, especially when the surgeon relies solely on visual feedback. (allan20183, allan2017visual) Moreover, the training process for new surgeons is lengthy, as it takes considerable time for them to master the techniques.(allan20183)

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