Interaction Design for VR Application in Manufacturing

VR technology has become ever-matured over the last few years and there have been many research and practice in adopting VR in industrial contexts. However, user experience-related challenges in this 3D virtual world are identified as the main obstacle preventing industry from effectively incorporating it into daily practice. In this thesis, it aims to explore and evaluate different interaction design solutions (i.e., natural hands vs. controller) to best support the practices in the production context.

Tasks
- Identify different ways of VR interaction available today.
- Explore natural hands interaction in VR model using Leap Motion and HTC Vive Headset.
- Assess and compare natural hands interaction with controller interaction.
- Map the interaction design with suitable tasks.
- Implement the VR system that demonstrates the study results.

Goals
- Development of the VR system that demonstrates different interaction designs for different tasks.
- Provide guidelines, mapping interactions designs with task characteristics
  - Pros and cons of different interaction design approaches
  - When and why to choose certain approach.