Contents

1 Local Anesthesia VR Simulation with Haptics

1.1 Overview

This document provides comprehensive technical documentation for the Local Anesthesia VR Simulation with Haptics project. Developed by the NYU College of Dentistry, this VR simulation has been enhanced through a collaboration with the Applied Interactive Multimedia Laboratory to integrate haptic feedback.

1.2 Controls

Image

- **Y**: Calibrate syringe.
- **X**: Enable/Disable haptics.
- **A and B**: Adjust chair height.
- **Left Joystick**: Move (forward, backward, left, right).
- **Right Joystick**: Rotate (left and right).
- **Left Grip Trigger**: Enable Passthrough.
- **Touch the Syringe**: Disable Passthrough.

1.3 Project Contents

- **Google Drive Link for Project Files**: Download Here
  - `Demo-bundle.zip`: Contains demos for device calibration.
  - `HapleyTest.zip`: Main Unity simulation project.
  - `HaplyInverseComponentsInstaller-2.0.0.exe` and `HaplyInverseComponentsInstal` Device drivers for Haply hardware.

- `serialmanager.py`: Python script for auto-detecting syringe modules.