

Hand Gesture Recognition System using iFusion™ platform enables contactless communication with devices in medical environment

Client Need

The client builds intuitive human machine interfaces at the intersection of neuroscience, mixed reality and artificial intelligence, transforming multiple industries.

The client needed a solution that could identify the human hand, categorize whether it is left or right hand and recognize the gestures in a healthcare environment.

What We Did

Developed a solution using iFusion™ platform to process RGBD images and provide tracked hand point data in order to detect hands along with gestures from the data sets.



Our Approach



Segmented the hand region from hand point using a sphere with certain radius



Converted the segmented region to point cloud in CSV/OBJ format



Extracted 3D shape feature of point cloud and saved the data to OBJ/CSV/TXT format



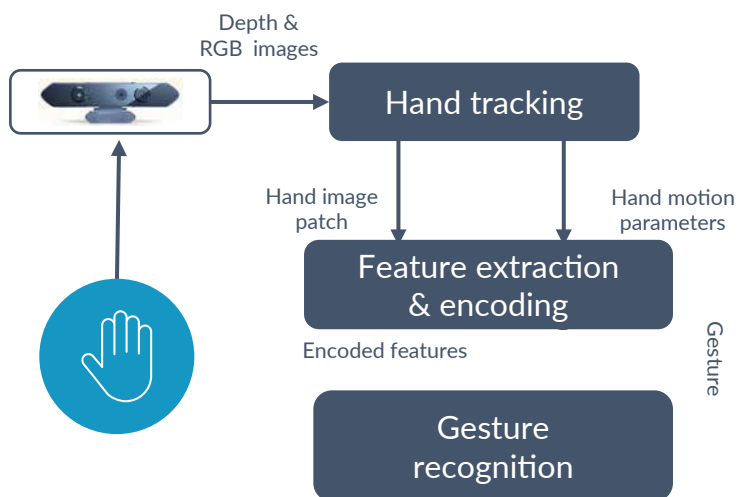
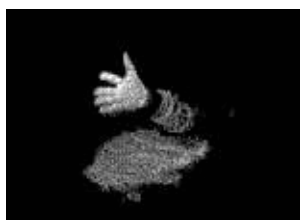
Used machine learning algorithms for preprocessing, extraction, classification and post processing of data



Identified the gesture from feature-extracted data using powerful recognition algorithms such as ANBC from GRT machine learning library

What the Client Gained

- Contactless communication with the medical devices to prevent contamination and ensure hygiene
- Extensible solution that could use the detected gestures to communicate further based on use-case



About Innominds

Innominds is an AI-first, platform-led digital transformation and full cycle product engineering services company headquartered in San Jose, CA. Innominds powers the Digital Next initiatives of global enterprises, software product companies, OEMs and ODMs with integrated expertise in devices and embedded engineering, software apps and product engineering, analytics and data engineering, quality engineering, and cloud and devops, security. It works with ISVs to build next-generation products, SaaSify, transform total experience, and add cognitive analytics to applications.