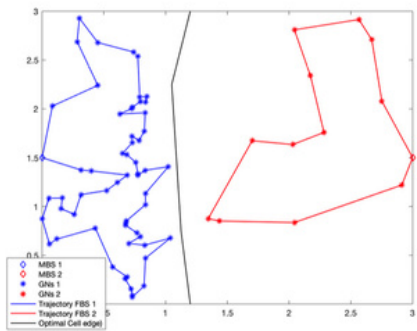# Project Snippets

Trajectory optimisation of Flying Base Stations in 5G networks 🔗 **github.com**
Developed a novel clustering algorithm to optimise the trajectories of two Flying Base Stations (FBSs) serving ground nodes in areas divided by the shared edge of two 5G base stations. The algorithm, validated by thousands of simulations, enhances network coverage and efficiency, particularly in regions with complex geographical constraints, advancing the integration of 5G and UAV technologies for more effective wireless network solutions.

Gesture Recognition in the Context of Touchless Interface in Surgery Rooms 🔗 **github.com**
Investigated the application of gesture recognition in surgical operating rooms to maintain sterility using Google's MediaPipe framework. Proposed a novel method for touchless interface in medical settings, developing and testing a model with promising results for gesture-based control of the Picture Archive and Communication System (PACS). This project aimed to minimise the need for physical interfaces like mice and keyboards in sterile environments, leveraging gesture recognition technology to enhance operational efﬁciency and reduce contamination risks in surgery.
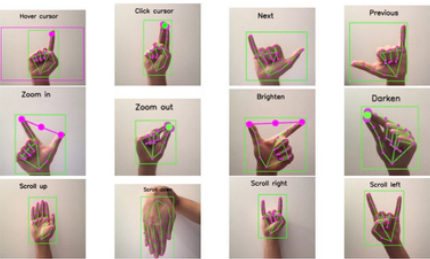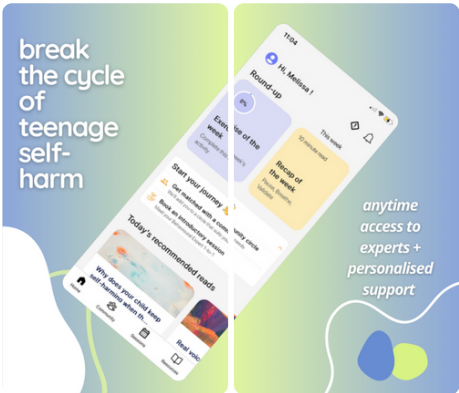

Figure 3.2: Gestures to control mouse commands

Figure 3.3: Gestures to control keyboard commands

Consumer facing mobile app 🔗 **apps.apple.com**
Spearheaded the end-to-end development of the Speek mobile app, a community-driven platform designed to support parents in addressing teenage self-harm. Led product discovery, guided UX design, and independently mastered Bubble to deploy the initial app version within 5 weeks. Successfully scaled the user base to over 400 within 12 weeks, achieving a sixfold increase in user stickiness, demonstrating rapid development skills and effective user engagement strategies.

More about me

Interests

Entrepreneurship, Philosophy, Science, Technology, Brazilian Jiu Jitsu (achieved the blue belt rank), Equestrianism (over 7 years of experience), Football (played competitively at an amateur level) & Travel (travelled to over 30 countries across 4 continents)

Languages spoken

English, Arabic