Running is a basic motor skill and extremely popular form of exercise. Flawed running kinematics can cause problems including injury and an overall lower running economy (energy efficiency). Gait training has been shown to be beneficial in running economy and preventing injuries. Access to coaching or data analysis typically has a high barrier of entry when it comes to running form and data.

A simple web application for the user to upload a video, receive real-time analysis while the video is playing, and store all personal data was deployed. Pelvic Oscillation, Stride Rate, and athlete posture were all able to be calculated using the pose detection system combined with logic. Functionality to store and retrieve all personal data from the database corresponding to user profiles allows was implemented. Flexibility to analyze an athlete from multiple perspectives and environments.

Future applications of a full formed web application for running analytics could feature more advanced analytics such as ground contact time, arm swing, estimated torso rotation etc. Machine learning models can be implemented to provide coaching and general feedback. The modularity of the web application also lends itself to be useful in other areas of biomechanics.

- Opportunities to provide biomechanical analysis for rehab medicine
- Tools for physical therapists to assist in measurements