

ELEVATOR PITCH

Virtual Reality is a 21st century technology with numerous consumer, industrial, and scientific use cases, growing at an exponential rate each day. The crux of this project is to harness the undiscovered potential of virtual reality as a teaching tool for physical feats, and to teach a consumer tightrope walking. The brilliance of this project steams from the convenience it would provide to a customer, who may be too afraid or unequipped to create their own real life tight-rope experience with a physical rope to practice on. The application could be enticing for any individual, from olympic champion, to aspiring gymnast. As long as there is an interest and intent to learn this powerful skill, this project could transform dreams to reality.

Our application removes any physical barriers and provides an immersive experience to the end user with a simple, affordable set of gadgets that provide assistance and enhance the teaching aspect. This project doesn't just intend to stand out as a high-end virtual reality experience, but build a new methodology into the virtual reality experience by bundling a set of sensors to precisely gauge the user's feedback as they learn to cross the tightrope. These high-end sensors can be used to calculate pressure and physical position of a consumer's foot by strategically building our engine into the sole of a shoe. This information could be used to render with precise accuracy into virtual reality the exact input of a user's foot and provide feedback as to their performance. With this information, the user will get a sense of how well he or she would actually be doing if performing this activity in real life, thus building a genuine training experience. While the application is receiving and processing pressure data during the simulation, a virtual instructor could ingest this data to determine what the user is doing and what he or she can do to improve the progress being made and correct any mistakes.

Psychologically, it is significantly more discomfoting to stand at the edge of a skyscraper, as opposed to peering out a window in an atypical home. Similarly, it is also more difficult to tightrope between two mountains, rather than between two podiums stationed in a generic gymnasium. This simulation can visually create situations that will test the user's fear of heights and ingest this data to determine how it could affect their performance. This type of training could be used to slowly alleviate any fears of heights that the typical user might have, and train them for an intense real-world scenario. The data sourced from this applications could also be used by university research institutions to field psychological studies on the human fear of heights.

The constantly interactive and complementary relationship between the virtual reality simulation and the pressure data is what sets this project apart from other virtual reality applications trying to simulate similar physical challenges. Often in simulations that are crossed between the physical and virtual worlds, thousands upon thousands of dollars are spent on tiny sensors and gadgets that are required to generate the scenario. In this project, setting up the training environment is simplified because there is no need for additional sensors and other devices to be placed around the room. To cater to the consumer eternal desire for convenience, this is a less costly way of learning this particular skill with the utmost accuracy without even having to leave your home.