

Ángulo

Automatic Goniometer

By *Paramo Innovations*



Introduction

Paramo Innovations consists of Caleb Schulz and Gregory Russell. We are both students in the Electronics and Computer Engineering Technology program at Camosun College. Our project, the *Ángulo* is an innovative joint flexibility self-measurement device. The primary applications for the *Ángulo* are in the fitness and physiotherapy fields.

Our Project

The *Ángulo* is unique in that no other goniometer allows a user to measure their own flexibility. Goniometers range from simple jointed rulers to laser-sighted digital devices but they all require one person to measure a second person. An *Android* smartphone application allows remote operation of the *Ángulo*.

Our Team



Caleb Schulz

Software Design & Hardware Configuration

Caleb wrote the software for the *Arduino*-based architecture and chose the hardware used in the project. He also wrote the *Android* application used with the *Ángulo* device.



Gregory Russell

Exterior Package Design & Power Management

Gregory designed the external packaging and hardware layout using *Sketchup*. He also dealt with the power management aspect of the project.

Conclusion

We at *Paramo Innovations* thank you and hope you enjoyed learning about the *Ángulo* automatic goniometer. While the project is self-funded, we would like to thank our instructors in the Electronics Department for their time and expertise, as well as Chad Paget for his 3D printing services. Please contact us at paramo.innovations@gmail.com for more information.