

SANTIAGO CADAVID

Biomedical Engineer

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🌐 https://cadavis8.github.io/ in www.linkedin.com/in/santiago-cadavis

📍 Auckland, New Zealand

PROFILE

I am a Biomedical Engineer with experience measuring, acquiring and processing human physiological signals, controlling environmental variables in hospital sensors and installing, calibrating, repairing and inspecting medical equipment. I have a good understanding of a wide range of medical devices, electronics principles and medical concepts, which allow me to liaise between the clinical personnel and engineers making me an influential member of cross-functional teams. On top of my technical background, I have a general understanding of ICT management and digital transformation at a corporate level with an emphasis on innovation and marketing due to my recent studies in Technology Management.

EXPERIENCE

Biomedical Engineer

BV Medical

📅 October 2020 – Currently 📍 Auckland, NZ

- Performs preventive/scheduled maintenance on medical devices, and installs, calibrates, repairs and inspects medical equipment.
- Participates with the team on medical equipment evaluations, installations and upgrades, including software revision.
- Teaches clinical and technical staff of the medical centres on the operation, safe use, care and handling, and user maintenance procedures for medical equipment.
- Performs equipment repairs of substantial difficulty to a level requiring generic test instrumentation, or diagnostic software.
- Conducts complete performance assurance and electrical safety testing.
- Determines the need to remove and/or replace malfunctioning medical devices from service and implements accordingly.

Assistant manager

MK RD Limited

📅 August 2018 – October 2020 📍 Auckland, NZ

Field service engineer

Iforware S.A.S.

📅 January 2017 – June 2017 📍 Medellín, Colombia

- To design and create prototypes using open-source electronic prototyping platforms (i.e. Arduino) and commercial electronics.
- To operate with a variety of analog and digital transducers (temperature, humidity, dew point, gas concentration) for industrial and healthcare applications.
- To design and develop printed circuit boards (PCB) and assemble them.
- To develop hardware of traceability, telemetry and control.
- To support software tests in traceability, telemetry and control.
- To keep the correct operation of sensors and the telemetry system that were installed in hospitals and laboratories.

SKILLS

Medical Devices Electrical/Electronics
New enterprise development
Technology Marketing
Digital signal acquisition
Digital signal processing
Surface electromyography
Swallowing disorders
Academic and clinical research Science
Physics

General Hospital Monitoring
Polygraph Monitoring
Cardiovascular Therapeutic
Anesthesiology Therapeutic
Physical Medicine Therapeutic
Surgical
Dental Devices
Radiology Diagnostic



Microsoft Office MATLAB LabChart
LaTeX Arduino PCB design software
HTML Fusion 360

Curious A innate talent to teach
Innovative Approachable attitude
Commitment

LANGUAGES

English
Spanish



EDUCATION

BSc(Eng) Biomedical Engineering
Instituto Tecnológico Metropolitano (ITM)
📅 2012 – 2017

Diploma level 7 in Technology
Management

Aspire2 International (New Zealand)
📅 2017 – 2018

RESEARCH EXPERIENCE

Research Fellow

Instituto Tecnológico Metropolitano

📅 January 2016 – December 2016 📍 Medellín, Colombia

- To evaluate different kinds of electrodes and their position configurations to improve the signal-noise ratio during surface electromyography (sEMG) signal acquisition.
- Acquisition of sEMG signals in healthy people during motor gestures involved during swallowing.
- To evaluate the activation patterns of each motor gesture performed.
- To prepare and carry out a workshop for students from different universities about electromyography and its applications.

PUBLICATIONS

📄 Journal Articles

- Cadavid-Arboleda, Santiago et al. (2017). **"Assessment of Surface Electromyography During Orofacial Praxis in Healthy Subjects"**. In: *VII Latin American Congress on Biomedical Engineering CLAIB 2016, Bucaramanga, Santander, Colombia, October 26th -28th, 2016* 60, pp. 165–168. DOI: 10.1007/978-981-10-4086-3. URL: <http://link.springer.com/10.1007/978-981-10-4086-3>.
- Cantillo-Mackenzie, German et al. (2017). **"Surface Electromyographic Characterization of Five Orofacial Ideomotor Praxis in 20 Healthy Individuals"**. In: *VII Latin American Congress on Biomedical Engineering CLAIB 2016, Bucaramanga, Santander, Colombia, October 26th -28th, 2016* 60, pp. 221–224. DOI: 10.1007/978-981-10-4086-3. URL: <http://link.springer.com/10.1007/978-981-10-4086-3>.
- Restrepo-Agudelo, Sebastian et al. (2017). **"Improving surface EMG burst detection in infrahyoid muscles during swallowing using digital filters and discrete wavelet analysis"**. In: *Journal of Electromyography and Kinesiology* 35, pp. 1–8. ISSN: 10506411. DOI: 10.1016/j.jelekin.2017.05.001. URL: <http://www.sciencedirect.com/science/article/pii/S1050641116302991>.

ADDITIONAL INFORMATION

- Electrical Appliance Serviceperson (EAS) / Credential ID EAS-TLC 154510

REFERENCES

References available upon request.