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Research outputs

Machine learning approach for fatigue estimation in sit-to-stand exercise

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What You Need to Know About Artificial Intelligence: Technical Introduction

Perdomo Charry, O. J., Orjuela-Cañón, A. D., González-Osorio, F. A. & Toledo-Cortés, S., 2021, *What You Need to Know About Artificial Intelligence: Technical Introduction*. Springer, p. 13-25 13 p. 2. (Current Practices in Ophthalmology).

A Conditional Generative Adversarial Network-Based Method for Eye Fundus Image Quality Enhancement

Pérez, A. D., Perdomo, O., Rios, H., Rodríguez, F. & González, F. A., Nov 20 2020, *Ophthalmic Medical Image Analysis - 7th International Workshop, OMIA 2020, Held in Conjunction with MICCAI 2020, Proceedings*. Fu, H., Garvin, M. K., MacGillivray, T., Xu, Y. & Zheng, Y. (eds.). Springer Science and Business Media Deutschland GmbH, Vol. 12069. p. 185-194 10 p. (Lecture Notes in Computer Science (including subseries Lecture Notes in Artificial Intelligence and Lecture Notes in Bioinformatics); vol. 12069 LNCS).

Hybrid Deep Learning Gaussian Process for Diabetic Retinopathy Diagnosis and Uncertainty Quantification

Toledo-Cortés, S., de la Pava, M., Perdomo Charry, O. J. & González, F. A., Nov 20 2020, *Ophthalmic Medical Image Analysis - 7th International Workshop, OMIA 2020, Held in Conjunction with MICCAI 2020, Proceedings*. Fu, H., Garvin, M. K., MacGillivray, T., Xu, Y. & Zheng, Y. (eds.). Springer Science and Business Media Deutschland GmbH, p. 206-215 10 p. (Lecture Notes in Computer Science (including subseries Lecture Notes in Artificial Intelligence and Lecture Notes in Bioinformatics); vol. 12069 LNCS).

Automatic estimation of pose and falls in videos using computer vision model

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Segmentation of retinal fluids and hyperreflective foci using deep learning approach in optical coherence tomography scans

Sanchez, Y. D., Quijano, B., Padilla, F. D., Perdomo, O. & González, F. A., Nov 3 2020, *16th International Symposium on Medical Information Processing and Analysis*. Romero, E., Lepore, N., Brieva, J. & Linguraru, M. (eds.). SPIE, 115830H. (Proceedings of SPIE - The International Society for Optical Engineering; vol. 11583).

SOPHIA: System for Ophthalmic Image Acquisition, Transmission, and Intelligent Analysis

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Cadena, O. P., Preciado, C. G., Cruz, A. N., Hernández, N. P. C., Beltran, A., Sarmiento-Rojas, J., Quiroga-Torres, D. A., Perdomo Charry, O. J. & Aya-Parra, P. A., Jan 1 2020, *8th Latin American Conference on Biomedical Engineering and 42nd National Conference on Biomedical Engineering - Proceedings of CLAIB-CNIB 2019*. González Díaz, C. A., Chapa González, C., Laciár Leber, E., Vélez, H. A., Puente, N. P., Flores, D-L., Andrade, A. O., Galván, H. A., Martínez, F., García, R., Trujillo, C. J. & Mejía, A. R. (eds.). Springer, p. 1326-1332 7 p. (IFMBE Proceedings; vol. 75).

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Sistema basado en internet de las cosas (IoT) para la monitorización en tiempo real de variables de temperatura y humedad en un equipo de refrigeración de área de farmacia de un hospital de cuarto nivel

Quiroga Torres, D. A., Baquero Soto, A. B., Ballesteros Coral, D. S., Aya Parra, P. A., Bernal Muñoz, H. A., Sarmiento Rojas, J. S., Córdoba-Hernández, N. P., Beltran, A., Cruz, A. N. & Perdomo Charry, O. J., Sep 10 2019, *Retos en la formación de ingenieros en la era digital*. p. 1-9 9 p.

Classification of diabetes-related retinal diseases using a deep learning approach in optical coherence tomography

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Automated Diabetic Macular Edema (DME) analysis using fine tuning with inception-resnet-v2 on oct images

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A method to detect potentially malignant skin lesions through image segmentation

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Supervised online matrix factorization for histopathological multimodal retrieval

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Automated Diabetic Macular Edema (DME) Analysis Using Fine Tuning with Inception-Resnet-v2 on OCT Images

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Perdomo, O., Otalora, S., Gonzalez, F. A., Meriaudeau, F. & Muller, H., May 23 2018, *2018 IEEE 15th International Symposium on Biomedical Imaging, ISBI 2018*. IEEE Computer Society, p. 1423-1426 4 p. (Proceedings - International

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Non-invasive model for detection of extrinsic risk factor of sudden infant death syndrome

Perdomo Charry, O. J. & Rodríguez Cediél, A. C., 2018.

Supervised online matrix factorization for histopathological multimodal retrieval

Contreras, V. H., Lara, J. S., Perdomo, O. J. & González, F. A., 2018, *14th International Symposium on Medical Information Processing and Analysis*. Lepore, N., Romero, E. & Brieve, J. (eds.). SPIE, 109750Y. (Proceedings of SPIE - The International Society for Optical Engineering; vol. 10975).

Patrones biomecánicos de referencia para el diagnóstico temprano de trastornos del equilibrio: Estudio piloto

Cifuentes-De La Portilla, C., Perdomo-Charry, O. & Argothy-Bucheli, R., Jan 1 2017, In: *Revista Mexicana de Ingeniería Biomedica*. 38, 1, p. 93-102 10 p.

Combining morphometric features and convolutional networks fusion for glaucoma diagnosis

Perdomo, O., Arevalo, J. & González, F. A., 2017, *13th International Conference on Medical Information Processing and Analysis*. Lepore, N., Brieve, J., García, J. D. & Romero, E. (eds.). SPIE, 105721G. (Proceedings of SPIE - The International Society for Optical Engineering; vol. 10572).

Convolutional network to detect exudates in eye fundus images of diabetic subjects

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Training Deep Convolutional Neural Networks with Active Learning for Exudate Classification in Eye Fundus Images

Otálora, S., Perdomo, O., González, F. & Müller, H., 2017, *Intravascular Imaging and Computer Assisted Stenting, and Large-Scale Annotation of Biomedical Data and Expert Label Synthesis - 6th Joint International Workshops, CVII-STENT 2017 and 2nd International Workshop, LABELS 2017 Held in Conjunction with MICCAI 2017, Proceedings*. Arbel, T. & Cardoso, M. J. (eds.). Springer, p. 146-154 9 p. (Lecture Notes in Computer Science (including subseries Lecture Notes in Artificial Intelligence and Lecture Notes in Bioinformatics); vol. 10552 LNCS).

A novel machine learning model based on exudate localization to detect diabetic macular edema

Perdomo Charry, O. J., 2016, In: *Lecture Notes in Computer Science*.

Association of gait and vertical jump in elderly women.

Perdomo Charry, O. J., 2015, In: *European Journal of Public Health*.

Association of gait and vertical jump in elderly women

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Perdomo Charry, O. J., 2015, In: *European Journal of Public Health*.

Simultaneous measurement of trunk orientation and centre of pressure for postural stability evaluation

Šeketa, G., Ortiz, G., Wilches, C., Perdomo, O., Celić, L., Lacković, I., Zequera, M. & Magjarević, R., 2015, *6th European Conference of the International Federation for Medical and Biological Engineering - MBEC 2014*. Lackovic, I. & Vasic, D. (eds.). Springer, p. 363-366 4 p. (IFMBE Proceedings; vol. 45).

Pilot study: Biomechanical assessment of the plantar pressure distribution in healthy subjects using the pressure platform EcoWalk

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Modeling and simulation of ventricular repolarization or T-wave of ECG of subjects with type 1 diabetes during adrenaline infusions

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Pilot study: Assessing repeatability of the EcoWalk platform resistive pressure sensors to measure plantar pressure during barefoot standing

Zequera, M., Perdomo, O., Wilches, C. & Vizcaya, P., 2013, In: *Journal of Physics: Conference Series*. 450, 1, 012029.

Modelagem matemática e avaliação de novos parâmetros para estudo do efeito de fármacos na repolarização ventricular em indivíduos com diabetes

Perdomo Charry, O. J., 2012, In: *Universidade Federal de Santa Catarina*.

Morphological analysis of T-wave in vectorcardiographic leads system by a bi-Gaussian approach in patients under effect of salbutamol

Perdomo, O. J., Robinson, E. J., Suzuki, D. O. H., Heller, S. R. & Marques, J. L. B., 2012, *2012 Annual International Conference of the IEEE Engineering in Medicine and Biology Society, EMBC 2012*. p. 5494-5497 4 p. 6347238. (Proceedings of the Annual International Conference of the IEEE Engineering in Medicine and Biology Society, EMBS).

Activities

32nd Annual Conference of the International Society for Environmental Epidemiology

Ana Maria Barragan Gonzalez (Participant), Daniel Alejandro Buitrago Medina (Participant), Oscar Julian Perdomo Charry (Participant), Luisa Fernanda Londoño Tobón (Participant), Carlos Andres Moya Ortiz (Participant), Mariana Ospina Espinosa (Participant), Santiago Noriega Ramírez (Participant), Isabella Hernandez Duarte (Participant), Sofia De Brigard Cabal (Participant), Catalina Rojas Reyes (Participant) & Sara Juliana Guerrero Leon (Participant)
Aug 27 2020

Projects

Automatic tool for analyzing the physical activity of people in a residential environment through artificial intelligence techniques and the internet of things

Orjuela Cañón, A. D., Aguia Rojas, K. & Perdomo Charry, O. J.
9/20/19 → 4/19/21

Development of a device for the measurement of the maximum static inspiratory and expiratory pressure

Perdomo Charry, O. J. & Vargas Pinilla, O. C.
1/12/21 → 1/11/22

Environment and Health

Barragan Gonzalez, A. M., Buitrago Medina, D. A., Londoño Tobón, L. F., Moya Ortiz, C. A., Rojas Reyes, C., Ospina Espinosa, M., Noriega Ramírez, S., Hernandez Duarte, I., De Brigard Cabal, S., Guerrero Leon, S. J., Orjuela Cañón, A. D. & Perdomo Charry, O. J.

5/4/20 → 9/30/21