

John Jaime Sprockel Díaz. MD; MSc

***Birthday: 10 de Octubre 1976
Calle 147 N 7B-58 Apartment 902
Bogotá- Colombia
Mobile +5 318 4009973
e-mail: jjsprockel@hotmail.com***



Internal medicine, Computer science, Artificial intelligence, Machine learning, Clinical decision support systems, Diagnosis, Prognosis, Medical education.

PROFESSIONAL PROFILE:

Physician with an Internal Medicine specialization and a Master's degree in Systems and Computer Engineering focused on Intelligent Systems, engaged in the medical training process of undergraduate and postgraduate for about ten years. Experience in clinical research for eight years in issues of Chest Pain, Acute Coronary Syndrome and Heart Failure mainly through the application of intelligent systems. Pair evaluator of several scientific journals.

SKILLS:

Functional:

Innovation and Creativity
Dedication and commitment
Responsiveness under pressure
Leadership
Hard worker

Technical:

Diagnosis and treatment of clinical conditions
Critical care and medical emergency approach
Medical education
Planning and development of virtual courses
Statistical planning and analysis
Structuring and conducting clinical research
Thesis counseling
Review of medical papers
Structuring a process for pattern recognition
Software programming in java
Development of clinical decision support systems

PROFESSIONAL EXPERIENCE:

FOUNDATION UNIVERSITY OF HEALTH SCIENCES - FUCS

October 2010 – to date

Institution of Higher Education oriented to the academic, clinical and basic education of health professionals. FUCS has 5 health faculties and its main strength is medical training at the postgraduate level where there are 46 medical specialties. It also has two high-quality accredited practice scenarios: San Jose University Hospital and San Jose University Children's Hospital. Physician

Professor of Semiology and Coordinator of the Fifth Semester (undergraduate)

Main responsibilities:

- Structuring and development of the program
- Tutorial of semiology students
- Monitoring of compliance of the classes
- Coordination of tutors
- Evaluation and feedback
- Identify and support students in trouble
- Submit reports to the dean

Professor of Internal Medicine (postgraduate)

Main responsibilities:

- Attention of internal medicine patients
- Student tutoring during clinical practice
- Evaluation and feedback
- Driving journal club
- Thesis counseling
- Conducting clinical research

EL TUNAL HOSPITAL

April 2005 – to date

Company providing public health services framed in the innovative model of network care with a focus on comprehensive risk management, improving the health conditions of our users in the towns of Usme, Ciudad Bolívar, Sumapaz and Tunjuelito, maintaining citizen participation urban and rural.

Internist

Main responsibilities:

- Attention of internal medicine and critical care patients
- Generation of health reports
- Update clinical care guidelines

NUEVA GRANADA MILITAR UNIVERSITY

August 2008 – September de 2010.

It is an Autonomous University entity of the national order, with a special organic regime, whose main purpose is higher education and research, aimed at raising the academic preparation of members of the Military Forces and the National Police, active or retired; the civil employees of the defense sector, the relatives of all the previous ones, and the individuals that are linked to the university.

Professor of Internal Medicine (undergraduate and postgraduate)

Main responsibilities:

- Attention of internal medicine patients in emergency room
- Student tutoring during clinical practice
- Evaluation and feedback
- Driving journal club

DEPARTMENTAL HOSPITAL OF GRANADA – META

August 2003 – February de 2005

Internist

Main responsibilities:

- Attention of internal medicine patients
- Generation of health reports

ACADEMIC BACKGROUND:

2015 – Master in Systems and Computer Engineering Javeriana University	COLOMBIA
2003 – Specialization in Internal Medicine El Bosque University - Santa Fe Foundation of Bogotá	COLOMBIA
1998 – Doctor in Medicine National university of Colombia	COLOMBIA

Activities as peer evaluator of scientific journals:

Salud UIS Journal

Colombian Journal of Rheumatology

COMPLEMENTARY STUDIES:

Courses:

- Online non-credit course: “Project Initiation: Starting a Successful Project”. Google and offered through Coursera. Dec 19, 2022.
- Online non-credit course: “Foundations of Project Management”. Google and offered through Coursera. Dec 2, 2022.
- Online non-credit course: “Fundamentos del Management”. Pontificia Universidad de Palermo and offered through Coursera. Nov 23, 2022.
- Online non-credit course: “Planificación y gestión estratégica para Pymes”. Pontificia Universidad Católica de Chile and offered through Coursera. Nov 16, 2022.
- Online non-credit course: “Art and Science of Machine Learning en Español”. Google and offered through Coursera. Dec 13, 2021.
- Online non-credit course: “Hypothesis Testing in Public Health”, Johns Hopkins University and offered through Coursera. Dec 6, 2020.
- Online non-credit course: “Clinical Natural Language Processing”, University of Colorado System and offered through Coursera. Nov 4, 2020.
- Online non-credit course: “Developing Data Products”, Johns Hopkins University and offered through Coursera. Oct 4, 2020.
- Online non-credit course: “Practical Machine Learning”, Johns Hopkins University and offered through Coursera. Sept 23, 2020.
- Online non-credit course: “Regression Models”, Johns Hopkins University and offered through Coursera. Sept 15, 2020.
- XXVI CONGRESO COLOMBIANO DE MEDICINA INTERNA ACMI: Hacia una medicina clínica integral. 13-15 Ago de 2020
- Online non-credit course: “Statistical Inference”, Johns Hopkins University and offered through Coursera. Ago 21, 2020.
- Online non-credit Specialization: “Data Science: Foundations using R”, Johns Hopkins University and offered through Coursera. 08/08/2020.
- Online non-credit course: “Reproducible Research”, Johns Hopkins University and offered through Coursera. Ago 7, 2020.
- Online non-credit course: “Exploratory Data Analysis”, Johns Hopkins University and offered through Coursera. Ago 1, 2020.
- Online non-credit course: “Getting and Cleaning Data”, Johns Hopkins University and offered through Coursera. Jul 20, 2020.
- Online non-credit course: “R Programming”, Johns Hopkins University and offered through Coursera. Jul 3, 2020.
- Online non-credit course: “The Data Scientist’s Toolbox”, Johns Hopkins University and offered through Coursera. Jun 13, 2020.
- Curso: BUENAS PRÁCTICAS CLÍNICAS. FUCS Bogotá D.C., Colombia, los días 09 y 10 de junio de 2020
- Curso virtual: GOOD CLINICAL PRACTICE, NIDA Clinical Trials Network. 25 de mayo de 2020.

- Online non-credit course: “Introduction to TensorFlow for Artificial Intelligence, Machine Learning, and Deep Learning”, authorized by deeplearning.ai and offered through Coursera. 05/07/2019.
- Virtual course: “Clinical supervision with confidence”, UEA (University of East Anglia). Future Learn, 2018.
- Virtual Course: “Learning and virtual teaching”, Galileo University. EDX 2017.
- Virtual Course: "Protection of research in humans from research" National Institutes of Health (NIH). 2017.
- Virtual diploma: "Skills of integral management and management of the most relevant aspects of the diabetes, diagnosis, treatment and management of models of attention in Colombia". Bogotá (Colombia), 2015.
- Virtual Course: "Induction to pedagogical processes", SENA. 2015
- Virtual Course: "Acute heart failure", Colombian Society of Cardiology. 2014.
- Virtual Course: "Current management of atrial fibrillation and anticoagulation", Colombian Society of Cardiology. 2014.
- Course-workshop FCCS: basics for support in critical care. Bogotá (Colombia), 2008.
- Course of ACLS for experienced providers, provider experienced in advanced cardiopulmonary resuscitation. Bogotá (Colombia), 2008.
- Course of initial assistance to the patient politraumatized. CEMU, Bogotá (Colombia), 2006.
- Advanced cardiac vital support course: ACLS. Bogotá (Colombia), 2003.

Congress:

- ENCUESTRO REINVENTANDO LA EDUCACIÓN MÉDICA EN LA ERA DE LA COVID-19. La Asociación Colombiana De Facultades De Medicina. 05 y 06 de noviembre de 2020.
- Heart Failure 2017 - 4th World congress on acute heart failure. Paris (France), 2017
- eCardio 2017, the Virtual Congress of the Spanish Society of Cardiology. 2017
- 15th IEEE International Conference on Machine Learning and Applications. Anaheim, California (USA), 2016.
- III International symposium on cardiac failure, heart failure and pulmonary hypertension. Bogotá (Colombia), 2016.
- XXIV Colombian congress of internal medicine. Barranquilla (Colombia), 2016.
- XXVI Colombian congress of cardiology and cardiovascular surgery and of the XXVII South American cardiology congress. Pereira (Colombia), 2016.
- AI-2015 thirty-fifth SGAI international conference on artificial intelligence. Cambridge (United Kingdom), 2015.
- 10 Colombian computer congress (10CCC). Bogotá (Colombia), 2015.
- 1st International Ibero-Panamerican congress of internal medicine XXII National congress of medicine (SAM). Buenos Aires (Argentina), 2014.
- 9 Colombian computer congress (9CCC). Pereira (Colombia), 2014.
- XXIII Colombian congress of internal medicine. Cartagena (Colombia), 2014.

- II CV Forum & SPAF Academy LATAM, Boston (USA), 2013
- XXII Colombian congress of internal medicine. Cartagena (Colombia), 2012
- XXI ACMI congress - ACP: resolving controversies and paradigms - role of the internist. Barranquilla (Colombia), 2007.
- I International symposium medicine critical editorial distribuna: neurotrauma and neurointensivism. Bogotá (Colombia), 2007.
- Seminar E.D.H.E.P. European integral program for the donation of organs. Bogotá (Colombia), 2007.
- VIII Colombian congress of infectious diseases: Infections touch us all. Bogotá (Colombia), 2007.
- VI Colombian congress of critical medicine and intensive care. Medellín (Colombia), 2007.
- XIX Colombian congress of internal medicine: From the generation of knowledge to clinical practice. Cartagena (Colombia), 2006.
- Colombian congress of cardiology and cardiovascular surgery. Cartagena (Colombia), 2006.

PERSONAL INTERESTS:

Photography
 Fiction writing
 Science fiction reading
 Quality family time.

AWARDS AND DISTINCTION:

- ❖ **ANDRES BELLO AWARD TO THE BEST BACCELLERS**
December 1992.
- ❖ **BEST WORK OF INVESTIGATION IN POSTER STYLE**
XXIII Colombian Congress of Internal Medicine, Procongress Association of Internal Medicine
August 2014.
- ❖ **BEST WORK OF CLINICAL RESEARCH**
XXIII Colombian Congress of Internal Medicine, Procongress Association of Internal Medicine
August 2014.
- ❖ **SECOND PLACE IN CATEGORY OF ORAL PRESENTATION**
XVII Research Conference of the Faculty of Medicine University Foundation of Health Sciences

January 2014.

- ❖ **FIRST PLACE IN POSTER CATEGORY**
XVII Research Conference of the Faculty of Medicine University Foundation of Health Sciences
January 2014.
- ❖ **BETTER PRESENTATION OF PROJECT**
Symposium of Masters and Doctorates - IX Colombian Congress of Computation (CCC9), Colombian Computer Society
September 2014.
- ❖ **BETTER FOREIGN WORK**
2st International Ibero-Panamerican congress of internal medicine - XXIV National congress of medicine (SAM). Buenos Aires (Argentina),
November 2014.

PUBLICATIONS:

Sprockel-Díaz JJ, Chaves WG, Diaztagle-Fernández JJ, Martínez LO, Araque EC. Ferritina como biomarcador en pacientes hospitalizados con sospecha de COVID-19. *Revista de la Facultad de Medicina*. 2023;71(1):e97180-e97180.

Zambrano PDN, Restrepo HF, Sprockel JJ, Córdoba MLM, López AG. Asociación del grupo sanguíneo ABO con complicaciones en covid-19 : revisión sistemática y meta-análisis. *Revista Repertorio de Medicina y Cirugía*. 24 de mayo de 2022;28-39.

Sprockel J, Murcia A, Rincon J, Berrio K, Bejarano M, Santofimio Z, et al. High-sensitivity troponin in the prognosis of patients hospitalized in intensive care for COVID-19: a Latin American longitudinal cohort study. *Rev bras ter intensiva*. 24 de junio de 2022;34:124-30.

Sprockel Díaz JJ, Rincon JM, López MAR, Zuleta MB, Castellanos N, Saavedra ZS, et al. Echocardiographic 60-day mortality markers in patients hospitalized in intensive care for COVID-19. *Heart Lung*. 3 de enero de 2022;52:123-9.

Sprockel Díaz JJ, Parra ECA, Cabezas JJC, Rodríguez HC, Rumpf RPM, González EA, et al. Puntuaciones de alerta temprana para la identificación del riesgo de empeoramiento clínico o muerte en pacientes hospitalizados por COVID-19. *Acta Médica Colombiana [Internet]*. 9 de febrero de 2022 [citado 26 de agosto de 2022];47(3). Disponible en: <http://www.actamedicacolombiana.com/ojs/index.php/actamed/article/view/222>

Aponte I, Taboada N, Fierro DM, Veronesi LA, Coral DC, Sprockel J. Caracterización clínica, diagnóstica y pronóstica de los pacientes con sospecha de tromboembolismo pulmonar antes y durante la COVID-19. *Rev Argent Cardiol.* agosto de 2022;90(4):257-64.

Sprockel J, Rincon JM, Rondon M, Bejarano M, Castellanos N, Santofimio Z, et al. Echocardiographic markers of mortality at 60 days in patients with COVID-19 in the intensive care unit. *European Heart Journal* [Internet]. 1 de octubre de 2021 [citado 22 de octubre de 2021];42(Supplement_1). Disponible en: <https://doi.org/10.1093/eurheartj/ehab724.0134>

Sprockel J, Murcia AL, Rincon JM, Santofimio Z, Cardenas HM, Hernandez D, et al. High sensitivity troponin as a 60-day mortality marker in patients with COVID-19 in intensive care at a Latin American hospital. *European Heart Journal* [Internet]. 1 de octubre de 2021 [citado 22 de octubre de 2021];42(Supplement_1). Disponible en: <https://doi.org/10.1093/eurheartj/ehab724.1525>

Sprockel Díaz JJ, Martínez LO, Araque EC, Diaztagle JJ, Chaves WG. Pronóstico de los pacientes hospitalizados por Covid-19 que utilizaban inhibidores de la enzima convertidora de angiotensina o antagonistas del receptor de angiotensina II. *Revista Repertorio de Medicina y Cirugía* [Internet]. 9 de agosto de 2021 [citado 27 de enero de 2022]; Disponible en: <https://revistas.fucsalud.edu.co/index.php/repertorio/article/view/1214>

Sprockel Díaz JJ. Uso inicial de insulina en pacientes hospitalizados con diabetes mellitus tipo. *Revista Colombiana De Endocrinología, Diabetes & Metabolismo* [Internet]. 2021 [citado 27 de enero de 2022];8(4). Disponible en: <http://revistaendocrino.org/index.php/rcedm/article/view/714>

Sprockel Díaz J. Validación de cuatro reglas de predicción clínica de la nefropatía inducida por contraste en pacientes llevados a intervención coronaria percutánea. *Rev Argent Cardiol.* 2021;89:513-8.

Sprockel Díaz JJ. Chapter 13 - Artificial intelligence in cardiovascular medicine: Applications in the diagnosis of infarction and prognosis of heart failure. En: Barh D, editor. *Artificial Intelligence in Precision Health* [Internet]. Academic Press; 2020 [citado 2 de diciembre de 2020]. p. 313-28. Disponible en: <http://www.sciencedirect.com/science/article/pii/B9780128171332000136>

Cely JE, Mendoza EJ, Sprockel JJ, Perez LC, Mateus JM, Maldonado S, et al. Risk Factors for Community-Acquired Acute Kidney Injury in Medical Patients: A Nested Case-Control Study. *BPU.* 2020;49(6):677-84.

Diaztagle-Fernández JJ, Chaves-Saltiago WG, Sprockel-Díaz JJ, Acevedo-Velasco AD, Rodríguez-Benítez FH, Benavides-Solarte MF, et al. Asociación entre

hiponatremia, mortalidad y estancia hospitalaria en pacientes con falla cardíaca descompensada. *MedUNAB*. 29 de noviembre de 2019;22(3):294-303.

Sprockel J, Tejada M, Yate J, Diaztagle J, Gonzalez E. Intelligent systems tools in the diagnosis of acute coronary syndromes: A systemic review. *Arch Cardiol Mex*. 2017. <http://dx.doi.org/10.1016/j.acmx.2017.03.002>

Sprockel J, Mantilla H, Cruz L, Barón R, Diaztagle J. Implementation of risk stratification scales in the diagnosis of acute coronary syndromes. *Rev Colomb Cardiol*, 2017; 24 (5): 480-487.

Sprockel J, Diaztagle J, Gonzalez E. Automatic diagnosis of acute coronary syndrome using a multi-agent system based in neural networks. *Rev Colomb Cardiol*, 2017; 24 (3): 255-260.

Rojas L, Rodriguez D, Diaztagle J, Sprockel J. Characterization of patients with acute myocardial infarction without coronary artery disease. *Repertorio de Medicina y Cirugía*. 2017; 26(1): 22-26.

Sprockel J, Alfaro L, Cifuentes J, Jimenez M, Barón R, Chaves W. Prognostic Scores for Risk Stratification in Patients with Acute Heart Failure. *Rev Argent Cardiol* 2016;84:574-580. <http://dx.doi.org/10.7775/rac.es.v84.i6.9823>

Sprockel J, Gonzalez M, Baron R. Risk scales in the diagnosis of unstable angina in patients with chest pain with negative electrocardiogram and biomarkers. *Repertorio de Medicina y Cirugía*. 2016; 25(3): 156-162

Sprockel J, Barbosa Ch, Diaztagle J. Performance measures in quality of care of patients with acute myocardial infarction with ST elevation in hospital of San José of Bogotá. *Med UIS*, 2016;29(3):27-32.

Sprockel J, Gonzalez E. Assembly of neural networks within a federation of rational agents for the diagnosis of acute coronary syndromes. In: Bramer M, Petridis M, editors. *Research and Development in Intelligent Systems XXXII* [Internet]. Springer International Publishing; 2015. p. 289-300. Available from: http://dx.doi.org/10.1007/978-3-319-25032-8_22.

Sprockel J, Gonzalez E. Rational agents federation through neural networks assembly in the diagnosis of acute coronary syndromes. In: *Computing Colombian Conference (10CCC)*, 2015 10th. IEEE; 2015. p. 357-63.

Sprockel JJ, Diaztagle JJ. Diagnostic accuracy of a bayesian network model in acute coronary syndromes. *Rev Univ Ind Santander Salud*, 2015; 47 (7): 179-185.

Sprockel JJ, Diaztagle JJ, Chaves WG, Heras JC, Simon CJ, Afanador D, et al. Quality of care in acute coronary syndromes: a critical path implementation. *Rev Colomb Cardiol*, 2015 May;22(3):119-26.

Sprockel JJ, Tovar Diaz LP, Omaña Orduz OP, Saavedra MA, Chaves Santiago WG, Diaztagle Fernández JJ. Optimization of door-to-electrocardiogram time within a critical pathway for the management of acute coronary syndromes at a teaching hospital in colombia. *Critical Pathways in Cardiology*. 2015; 14 (1): 25-30.

Chaves WG, Diaztagle JJ, Sprockel JJ, Hernandez JI, Benavidez J, Henao D, et al. Factors associated with mortality in patients with decompensated heart failure. *Acta Med Colomb*, 2014 Dec 12;39(4):314–20.

Sprockel J, Barón R, Muñoz L, Peña M, Torres J. Implementation of risk stratification scales in the diagnosis of acute coronary syndromes. *Acta Med Colomb*, 2014 Jun;39(2 (supl. 1)):15.

Sprockel J, Diaztagle JJ, Alzate W, Gonzalez E. Neural networks for the diagnosis of acute myocardial infarction. *Rev Colomb Cardiol*. 2014 Jul;21(4):215–23.

Sprockel J, Agreda J. Technology oriented collaboration through multi-agent systems in operation of a group of transplantation. *Computing Colombian Conference (9CCC)*, 2014 9th. Pereira; 2014. p. 21–8. <http://ieeexplore.ieee.org/xpl/articleDetails.jsp?tp=&arnumber=6955362&queryText%3Dsprockel>

Sprockel JJ, Gonzalez E. Rational collaborative agents for the diagnosis of acute coronary syndromes [internet thesis]. [Bogotá, Colombia]: Pontificia Universidad Javeriana; 2014 [cited 2015 Nov 22]. Available from: <http://pegasus.javeriana.edu.co/~PI131-04-DiagInfartoSMA/docs/memoria.pdf>.

Sprockel JJ, Fontalvo MT, Araque EC. Analysis of a Latent Class Model in Diagnostic Classification Scales Acute Coronary Syndrome. *Universitas Médica*, 2014 Jun;55(2):138–51.

Sprockel J, Diaztagle JJ, Filizola V, Uribe L, Alfonso C. Clinical description and treatment of patients with acute coronary syndrome. *Acta Med Colomb*. 2014 Jun;39(2):124 – 130.

Sprockel J, Alzate W. Application of evolutionary computing in the diagnosis of myocardial acute infarction. *Repertorio de Medicina y Cirugía*. 2014;23(3):199–203.

Chaves WG, Diaztagle JJ, Vargas V, Mejía MG, Sprockel J, Hernandez JI. Compliance with guidelines in inpatients with heart failure ¿Where are we?. *Acta Med Colomb*, 2014 Mar;39(1):40–5.

Diaztagle JJ, Chaves WG, Sprockel JJ, Sastoque J, Nieto J, Barreto G, et al. Achievement of lipid goals in patients with secondary prevention hospitalized in the internal medicine service. *Acta Med Colomb*, 2013 Jun;38(2):54–60.

Sprockel JJ, Diaztagle JJ, Chaves WG, Simon C, Hernandez JI. Structuring and implementation of a critical pathway for the management of patients with acute coronary syndrome in the Emergency Department of San José Hospital in Bogotá. *Rev Colomb Cardiol*, 2013 Oct;20(5):262–74.

A handwritten signature in black ink, appearing to be 'John Jaime Sprockel Diaz', written in a cursive style. The signature is positioned above the printed name.

JOHN JAIME SPROCKEL DIAZ
C.C. 79.788.830 de Bogotá.