

Miguel Alfonso Feijóo García

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[Link to Personal Website](#)

RESEARCH INTEREST

Computer Science Education, Big Data and Analytics, Visual Analytics, Artificial Intelligence (Interpretable/Explainable), Machine Learning, Natural Language Processing

EDUCATION

- **M.Ed. in Higher Education Teaching – Universidad El Bosque, Colombia**
Thesis Title:
Dialogue between knowledge: A commitment to the articulation of alternative education at Universidad El Bosque.
Graduated in September 2021.
Ranking: 2nd out of 27 graduates.
- **M.Sc. in Information Engineering – Universidad de los Andes, Colombia**
Thesis Title:
SPLOR-T: an interactive urban spatiotemporal data exploration web approach.
Graduated in October 2019.
Ranking: 5th out of 17 graduates.
- **B.Sc. in Environmental Engineering – Universidad de los Andes, Colombia**
Thesis Title:
Distribution of Diseases Associated with Asbestos Exposure in the Municipality Sibate, Colombia.
Graduated in October 2019.
Ranking: 13th out of 53 graduates.
- **B.Sc. in Systems and Computing Engineering – Universidad de los Andes, Colombia**
Thesis Title:
Optimization of urban and complementary buses of the integrated public transport system (SITP) and Transmilenio.
Graduated in October 2016.
Ranking: 11th out of 24 graduates.

LANGUAGES

- Spanish (Native)
- English (High)
- French (Basic)

LABORAL AND TEACHING EXPERIENCE

02/2022 - current

Universidad Distrital Francisco José de Caldas, Colombia

Associate Professor. Leading instructor for undergraduate courses in the software engineering line of the undergraduate program of Systems Engineering:

- Undergraduate courses: Programming Models 1 (Software Design Patterns), Fundamentals of Software Engineering (Methodologies and Software Design), and Object-Oriented Programming.

07/2019 - current

Universidad El Bosque, Colombia

Assistant Professor. Leading instructor for graduate and undergraduate courses in the software engineering line and the undergraduate research track of the undergraduate program of Systems Engineering and two graduate programs from the College of Medicine—M.Sc. in Epidemiology and M.Sc. in Biomedical Computing:

- Graduate courses: Data Analytics for Health, Software and Architecture for Health Systems, Research 3, and Research 4.
- Undergraduate courses: Programming Fundamentals (CS1), Programming 1 (CS2), Programming 2 (Web Development), Software Engineering 1 (agile methodologies and software design), Databases 1 (relational databases), Big Data for Recommendation Systems (professional elective), Computing for Pharmaceuticals (non-CS majors), Supervised research 1 (undergraduate research track), and Supervised research 2 (undergraduate research track).

12/2019 - current	Instituto Colombiano para la Evaluación de la Educación (ICFES), Colombia Consultant and curricular reviewer for higher education national-wide tests—area: Software design and development.
01/2018 – 08/2018	ACCENTURE, Colombia Developer and consultant of projects in Analytics and Big Data in an AIP (Accenture Insights Platform) - Digital Transformation Project, with the airline Avianca for Latin America.
01/2017 – 01/2018	Centro de Excelencia y Apropiación de Big Data y Analítica en Colombia (CAOBA), Colombia Developer of projects with the Ministry of Science, Technology and Innovation of Colombia. I worked on applied research and the development of technological products of engineering that looked for the generation of solutions around Big Data & Data Analytics.
01/2016 – 01/2017	ARUKAY, Colombia Leading Instructor. I was responsible of the instruction of new technologies in K-8 extracurricular courses. I introduced AppInventor (MIT software for implementing mobile applications) and LEGO Mindstorms (for mobilerobotics).
01/2013 – 07/2016	Universidad de los Andes, Colombia Undergraduate Teaching Assistant. I assisted on multiple undergraduate courses of the program of Systems and Computing Engineering: Object-oriented Programming 2, Mobile Computing, InformationTechnologies for Organizations, and Modeling, Simulation, and Optimization.

PUBLICATIONS

I use the (*) symbol next to my name to mark those publications I worked with former advisees.

- Mejía Trujillo, M., Camelo-Romero, F., Ramírez-Arévalo, H., & **Feijóo-García, M.*** (2023). *GesTEApp: A Pilot Study on an Expert Web-based System that integrates Gestural Analytics and a Hybrid Recommendation System to support the early detection of ASD in children*. In Proceedings of the 9th International Conference on Information and Communication Technologies for Ageing Well and e-Health, ISBN: 978-989-758-645-3; ISSN: 2184-4984, pages 170-177. DOI: 10.5220/0011957500003476 (accepted on 23/02/2023, presented on April 2023).
- Ramírez-Arévalo, H.H., Torres-López, Y.I, & **Feijóo-García, M.A.** (2022). *Transdisciplinary strategy in Software Engineering between Systems Engineering and Medicine involving Significant Learning*. In Proceedings of “IV Congreso Internacional de Ciencias Básicas e Ingeniería - CICI 2022” (accepted on 17/09/2022, presented on October 2022).
- González-Daza, B. and **Feijóo-García, M.*** (2022). *Fynex: Work in Progress on a Web-based Approach That Implements a Hybrid Recommendation System for Preventing and Treating Diseases based on Eating Disorders*. In Proceedings of the 6th International Conference on Computer-Human Interaction Research and Applications, ISBN 978-989-758-609-5, ISSN 2184-3244, pages 193-200. DOI: 10.5220/0011543300003323 (accepted on 05/08/2022, presented on October 2022).
- Valoyes-Porras, D.; Rodríguez-Obregón, J.; Salamanca-Sánchez, D. and **Feijóo-García, M.*** (2022). *RetoñosApp: Work in Progress on a Platform to Support the Teaching of Programming in CS through the Automation and Customization of Learning Processes Guided by Artificial Intelligence*. In Proceedings of the 6th International Conference on Computer-Human Interaction Research and Applications, ISBN 978-989-758-609-5, ISSN 2184-3244, pages 179-186. DOI: 10.5220/0011538200003323 (accepted on 05/08/2022, presented on October 2022).
- Enciso, C.O., **Feijóo-García, M.A.***, & Morales, L.A. (2021). *Predicción apoyada por inteligencia artificial del requerimiento de ventilación mecánica prolongada en pacientes con Síndrome de dificultad respiratoria aguda por COVID-19*. Acta Colombiana de Cuidado Intensivo (Journal). Elsevier. **(Under review)**
- **Feijóo-García, M.A.**, & Hernández, J.T. (2021). *SPLORT: Evaluation of a Web based Approach for Descriptive and Exploratory Analysis of Multivariate Spatio temporal Data*. In Proceedings of the 14th International Symposium on Visual Information Communication and Interaction. DOI: 10.1145/3481549.3481554 (accepted on 07/01/2021, presented on 07/09/2021).
- **Feijóo-García, M.**; Ramírez-Arévalo, H. and Feijóo-García, P. (2021). *Collaborative Strategy for Software Engineering Courses at a South American University*. In Proceedings of the 13th International Conference on Computer Supported Education - Volume 1: CSEDU, ISBN 978-989-758-502-9 ISSN 2184-5026, pages 266-273. DOI: 10.5220/0010460602660273 (accepted on 05/02/2021, presented on 25/04/2021).
- **Feijóo-García, M.A.**, & Hernández, J.T. (2019). *Interactive Urban Spatio-Temporal Data Exploration Tool: A Web Approach*. 2nd Workshop CATAI on SmartData for Citizen Wellness. (presented on 24/10/2019).

ADVISING AND MENTORSHIP

I have served in multiple undergraduate and graduate committees of students' research in the colleges of Engineering and Medicine at Universidad El Bosque, Colombia. Here I list the projects I have chaired as an advisor.

Graduate Research

- Title: *Decision support model in patients with a diagnosis of Covid-19 and a requirement for prolonged mechanical ventilation.*
Defended in October, 2021. – received outstanding award.
Advisees: Cesar Orlando Enciso-Olivera, MD.
- Title: *Computational model to support the decision-making process in the clinical analysis of surgical female urinary incontinence*
Advisees: Orlando Augusto Uribe-Ramírez, MD.

Undergraduate Research

- Title: *Web Platform to Automate the Review and Qualification of Java Code in the Subject of Algorithmic Complexity at Universidad El Bosque*
Defended in June, 2023
Advisees: Álvaro Antonio Stagg, Daniela Aballay-García, and Rolando García-Mogollón
- Title: *Allcot Inventories: System for equipment inventory management of technology*
Defended in May, 2023
Advisees: Andrés Lozano, and David Poveda
- Title: *ASTR: Software de apoyo basado en un sistema de recomendación para la gestión de seguros*
Defended in December, 2022 – nominated for outstanding award.
Advisees: Daniela Sofía Lopez-Gonzalez, Santiago Albornoz-Tibasoza, and Josue David Ayala Armenta
- Title: *RetoñosApp. A virtual teaching platform to support the teaching of programming in CS.*
Defended in June, 2022 – received outstanding award.
Advisees: David Mauricio Valoyes Porras, Juan Sebastián Rodríguez Obregon, and David Stiven Salamanca Sanchez.
- Title: *GesTEApp: Recommendation system for the early detection of ASD through gestural analysis of children in Bogotá.*
Defended in November, 2021 – received outstanding award.
Advisees: Maria Gabriela Mejía Trujillo, Faiber Orlando Camelo Romero, and Santiago Andrés Bedoya Rodriguez.
- Title: *EclatApp: PMV promoter of general services through a mobile application.*
Defended in November, 2021 – nominated for outstanding award.
Advisees: Andrea Osorio Guerrero, Sergio Geovany Portilla Castañeda, and Fabio Andrés Manrique García.
- Title: *Fynex: Recommendation System for the prevention and treatment of diseases based on eating disorders.*
Defended in May, 2021 – received outstanding award.
Advisees: Briter Andres Gonzalez Daza and Dayan Alejandra Hincapie Cortes.
- Title: *FoodWeb: Information system for the management of inventory of ingredients in food preparation.*
Defended in November, 2020 – nominated for outstanding award.
Advisees: Camilo Suarez Garcia and Nicolas Rodriguez Valbuena
- Title: *rECORre: Mobile application for the effective measurement of the tourist carrying capacity applied in the Encenillo Biological Reserve.*
Defended in November, 2020.
Advisees: Johan Sebastian Palma Burgos, Nicolas Chaves Vela, and Wilson Javier Ariza Truque.

HONORS AND AWARDS

- Frederick N. Andrews Fellowship. The Polytechnic Institute of Purdue University, Indiana. Awarded on March 20th, 2023.
- Best Poster Award. 6th International Conference on Computer-Human Interaction Research and Applications (CHIRA 2022). Awarded for the paper entitled *RetoñosApp: Work in progress on a platform to support the teaching of programming in CS through the automation and customization of learning processes guided by Artificial Intelligence*. Awarded on October 2022.
- Honor (Outstanding) Award in recognition of the research work called "*Dialogue between knowledge: a commitment to the articulation of alternative education at Universidad El Bosque*", presented to obtain the M.Ed. in Higher Education Teaching. Universidad El Bosque. Awarded on September 24th, 2021
- Graduate Assistantship to study the M.Sc. in Information Engineering at the Universidad de los Andes, Colombia. Research assistantship as member of the CAOBA Alliance (*Center of Excellence and Innovation with Big Data and Analytics*) awarded by the Ministry of Science, Technology and Innovation of Colombia. Period: 01/2017 – 01/2018.
- Best engineering project in the Engineering Projects Exhibition (*ExpoAndes*) at the College of Engineering of the Universidad de los Andes with the project: "*Epinfo*". Awarded in November, 2012.

LEADERSHIP, SERVICE, AND VOLUNTEERING

- Degree Options Committee of the research area of the Program of Systems Engineering. Universidad El Bosque, Colombia. **Period:** 01/2020 – present.
- Volunteer Rector of the School in Prado (Human Resources Area) at the Fundación ColombiaCrece, as part of the catholic group "Movimiento de Vida Cristiana" from the Archdiocese of Bogotá, Colombia. In charge of leading and monitoring the academic and logistic resources and processes, and the activities carried out in the school for all courses, teachers, students and academic areas. **Period:** 01/2016 – 12/2017
- Volunteer Academic Coordinator of High School (Human Resources Area) at the Fundación ColombiaCrece, in charge of monitoring all volunteers and students in High School in their academic performance. **Period:** 01/2015 – 12/2015.
- Volunteer Teacher at the Fundación ColombiaCrece. In charge of teaching classes to older adults from a vulnerable population, in the areas of Biology, Physics and Mathematics in High School (6th, 8th, 10th and 11th grades). **Period:** 07/2014 – 12/2017.