

# Francisco Iacobelli

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## About

Computer Scientist with research interests at the intersection of artificial intelligence, human computer interaction and healthcare, with a focus on developing technology that benefits marginalized populations, and with experience coordinating academic and professional teams.

## Education

- 2005–2010 **PhD**, *Northwestern University*, Chicago, Computer Science.
- 2003–2005 **MSc**, *DePaul University*, Chicago, Computer Science.
- 1990-1996 **Ingeniero Civil Informático**, *Universidad Diego Portales*, Santiago, Chile.

## Experience

### Academic

- Aug 2024 – **Associate Professor**, *Loyola University Chicago*, Chicago, IL.  
Present Dual appointment in the department of Health Informatics and Data Science, and the department of Surgery. Conducts research on AI and health education for low literacy individuals and teaches courses related to AI and data science at the graduate level
- Aug, 2017 - **Associate Professor**, *Northeastern Illinois University*, Chicago, IL.  
Aug 2024 Teaches undergraduate and graduate courses mostly around artificial intelligence, machine learning and natural language processing. Performs graduate advising, mentors student researchers, coordinates department teacher's education program. Manages several grants of varied scope and in roles ranging from Principal Investigator (PI) to advisor. Research interest are at the intersection of AI and healthcare for low literacy populations.
- Sept, 2022 - **Visiting Associate Professor**, *Northwestern University*, Evanston, IL.  
Aug, 2023 Research on intelligent tutoring systems for minority populations, and machine learning applications to predictions of social determinants of health. Part of the Center for Advancing Machine Intelligence (CASMI).
- Aug, 2011 - **Assistant Professor**, *Northeastern Illinois Univeristy*, Chicago, IL.  
May, 2017 Performed regular teaching duties together with service such being the Graduate Advisor for the Department of Computer Science
- Jan - Aug, **Post-Doctoral Fellow**, *Northwestern University*, Evanston, IL. USA.  
2011 Worked at the Ford Center for Global Citizenship in the Kellogg School of Management. Research focus is on computational linguistics methods that help predict political differences between members of congress
- Jan - Aug, **Lecturer**, *Northwestern University*, Chicago, IL. USA.  
2011 Taught human-computer interaction at the undergraduate program of the School Of Continuing Studies

## Leadership/Service

- Oct, 2019 - **Board of Directors**, *Medical Organization for Latino Advancement*, Chicago, IL.  
Present Advises the organization as a whole and co-chairs a research and education committee. The committee coordinates research, mentorship and the organization's research symposium with an emphasis on technology, healthcare and equity. Advises and facilitates coordination of other activities such as collaborations with minority serving institutions and public health outreach activities.
- Aug, 2019 - **Associate Chair, Computer Science Department**, *Northeastern Illinois University*,  
Aug, 2022 Chicago, IL.  
Assists overseeing program evaluations, curriculum, hiring of new faculty and departmental accreditations. Coordinates a teacher endorsement program in computer science
- Aug, 2018 - **Acting Chair, Computer Science Department**, *Northeastern Illinois University*,  
July 2019 Chicago, IL.  
Managed 7 full time faculty and 20 part-time instructors. Directed department initiatives such as certification programs for teachers, job fairs, novel ways of recruiting and retaining students in computer science and STEM, curriculum development and balanced the teaching, service and research work of department members
- June,2016- **Core Leader, Education and Research**, *ChicagoCHEC*.  
July,2018 Coordinated researchers and students across institutions to develop multidisciplinary programs that prepare future professionals on health disparities in the Chicagoland area. Activities involved creating a summer research intensive program for students, as well as directing faculty and students in education and collaboration oriented research. This was a multi-institution grant between Northeastern Illinois University, Northwestern University and the University of Illinois at Chicago.
- 2011-2015 **Graduate Advisor**, *Northeastern Illinois University*.  
Processed applications for our graduate program in computer science, dealt with issues that affected our international and domestic students, advise students on courses, pre-requisites and strategies to succeed in graduate school. Modified graduate curriculum (pre-requisites and sequences of courses) to attain a higher degree of uniformity in terms of preparation of our students.
- June-July, **Consultant**, *University of Edinburgh*, Edinburgh, UK.  
2010 Advised the IDEA project, a collaboration between the School of Informatics and the School of Divinity, on text analysis and techniques to implement an automatic writing style coach

## Professional

- 2015-Present **Co-Founder**, *DataOwls*, Chicago-Central America.  
Offers strategy consultancy and training on data science and analysis to companies both in Chicago and in Central America.
- 2011-2014 **Director for R&D**, *BlueMessaging Inc.*, Mexico City, Mexico.  
Directed a team with skills in machine learning and artificial intelligence to develop, test and implement intelligent agents for customer support in the movie theatre and banking industries, both in Mexico and Colombia.
- 2000-2005 **Technical Specialist**, *The Revere Group*, Chicago, IL. USA.  
Implemented advanced searches and filters using fuzzy search algorithms, lead projects in coordination with The Revere Group's office in India and developed online business systems for a wide variety of companies and corporations. Some of these included: a membership system for a major real estate association, a de-dupping system for a university and a web based professional time tracking package for a small consulting company.

- 1998–1999 **Consultant**, *Soluziona S.A.*, Santiago, Chile.  
 Customized a dealership system (Global DMS) for the largest Ford dealer in Chile. Tasks included process specification and customization of workflow in the system, introduction of legal considerations for the Chilean trade, and other miscellaneous customization.
- 1997–1998 **Program Coordinator**, *Red de Desarrollo Solidario*, Santiago, Chile.  
 Developed online repositories of information for twelve non-for-profit organizations across Chile. Organized and conducted workshops focusing on social development and training session on technology and non-profit management for the twelve organizations.

## Recent Grant Support

- 2022-2025 **PI**, *NSF-Funded*.  
 Privacy Preserving Tutoring System for Health Education of Low Literacy Hispanic Populations. With SUNY-OW, CSU-DH and U. of Texas A&M San Antonio. \$600K.
- 2022-2027 **Co-PI**, *NSF-Funded*.  
 Advancing Computer Science Transfers for Success (ACTS). \$1.5M
- 2020-2025 **Co-I**, *NIH-Funded*.  
 Patient Navigation 2.0: Addressing the Challenge of Scaling Navigation through Checklist-based Implementation for minority populations. With Northwestern University. \$2M
- 2018-2020 **PI**, *NIH-Diversity Supplement Award*.  
 Exploring dialogue systems for low literacy breast cancer patients. \$250K

## Scientific community involvement

- Journal reviewer International Journal of Artificial Intelligence in Education, British Journal of Educational Technology, Journal of Medical Internet Research
- Conference reviewer Reviewer for the Design of Interactive Systems (DIS); Computer Human Interaction (CHI), European Conference on AI (ECAI), World Conference on Personality Recognition (WCPR)
- Events Organization Co-Organizer, CSCW2023 Co-Organizer 6<sup>th</sup> Medical Organization for Latino Advancement (MOLA) symposium 2022.; Organizer of various university level events such as NETT Day; Co-Chaired poster sessions for Interaction Design for Children (IDC 2006); Organized and Chaired a workshop on Grant Writing by the Office of Minority Health (2018)

## Languages

- |            |                  |                           |
|------------|------------------|---------------------------|
| Spanish    | <b>Excellent</b> | <i>Written and spoken</i> |
| English    | <b>Excellent</b> | <i>Written and spoken</i> |
| Portuguese | <b>Basic</b>     | <i>Basic conversation</i> |

## Miscellaneous

- Awards Northeastern Illinois University Excellence in Service, 2015; Illinois 50 for the future award, 2009
- Memberships Alliance for Graduate Education and the Professoriate (AGEP) Fellow, 2008-2011
- Citizenship U.S.

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## Publications

- T. Li and F. Iacobelli, "Purposeful ai," in *CSCW'2023 Special Interest Group (SIG)*., 10 2023.
- S. H. Baik, J. Buscemi, L. B. Oswald, D. Buitrago, J. Guitelman, F. Iacobelli, M. A. Simon, F. J. Penedo, and B. Yanez, "Advancing e-health interventions in cancer control and survivorship for hispanic/latina breast cancer patients," 11 2023.
- F. Iacobelli, A. Yang, L. Tom, I. S. Leung, J. Crissman, R. Salgado, and M. Simon, "Predicting social determinants of health in patient navigation: Case study," *JMIR Formative Research*, vol. 7, p. e42683, 3 2023.
- R. Balyan, R. Ackerman, and F. Iacobelli, "Intelligent tutoring systems in healthcare for low literacy population: A survey and the next steps," *IEEE*, 12 2022.
- F. Iacobelli, G. Dragon, G. Mazur, and J. Guitelman, "Web-Based Information Seeking Behaviors of Low-Literacy Hispanic Survivors of Breast Cancer: Observational Pilot Study," *JMIR Formative Research*, vol. 5, p. e22809, oct 2021.
- L. B. Oswald, S. H. Baik, J. Buscemi, D. Buitrago, F. Iacobelli, J. Guitelman, F. J. Penedo, and B. Yanez, "Effects of smartphone interventions on cancer knowledge and coping among Latina breast cancer survivors: Secondary analysis of a pilot randomized controlled trial," *Journal of Psychosocial Oncology*, pp. 1–13, oct 2021.
- S. H. Baik, L. B. Oswald, D. Buitrago, J. Buscemi, F. Iacobelli, A. Perez-Tamayo, J. Guitelman, A. Diaz, F. J. Penedo, and B. Yanez, "Cancer-Relevant Self-Efficacy Is Related to Better Health-Related Quality of Life and Lower Cancer-Specific Distress and Symptom Burden Among Latina Breast Cancer Survivors," *International Journal of Behavioral Medicine*, vol. 27, pp. 357–365, aug 2020.
- S. H. Baik, L. B. Oswald, J. Buscemi, D. Buitrago, F. Iacobelli, A. Perez-Tamayo, J. Guitelman, F. J. Penedo, and B. Yanez, "Patterns of Use of Smartphone-Based Interventions Among Latina Breast Cancer Survivors: Secondary Analysis of a Pilot Randomized Controlled Trial," *JMIR Cancer*, vol. 6, p. e17538, dec 2020.
- B. Yanez, L. B. Oswald, S. H. Baik, D. Buitrago, F. Iacobelli, A. Perez-Tamayo, J. Guitelman, F. J. Penedo, and J. Buscemi, "Brief culturally informed smartphone interventions decrease breast cancer symptom burden among Latina breast cancer survivors," *Psycho-Oncology*, vol. 29, pp. 195–203, jan 2020.
- S. Taylor, F. Iacobelli, T. Luedke, P. A. Matthews, M. Monge, J. Cooper, J. Moreira, P. Grippo, J. Girotti, Y. Molina, B. Yanez, and M. A. Simon, "Improving Health Care Career Pipeline Programs for Underrepresented Students: Program Design that Makes a Difference," *Progress in Community Health Partnerships: Research, Education, and Action*, vol. 13, no. 5, pp. 113–122, 2019.
- L. B. Oswald, J. Guitelman, D. Buitrago, J. Buscemi, F. Iacobelli, A. Perez-Tamayo, F. Penedo, and B. Yanez, "Community Perspectives: Developing and Implementing a Smartphone Intervention for Latina Breast Cancer Survivors in Chicago," *Progress*

in *Community Health Partnerships: Research, Education, and Action*, vol. 13, no. 5, pp. 131–136, 2019.

J. Buscemi, D. Buitrago, F. Iacobelli, F. Penedo, C. Maciel, J. Guitelman, A. Balakrishnan, M. Corden, R. F. Adler, L. C. Bouchard, A. Perez-Tamayo, and B. R. Yanez, “Feasibility of a Smartphone-based pilot intervention for Hispanic breast cancer survivors: a brief report,” *Translational Behavioral Medicine*, vol. 9, pp. 638–645, jul 2019.

B. Yanez, S. H. Baik, L. B. Oswald, D. Buitrago, J. Buscemi, F. Iacobelli, A. Perez-Tamayo, P. Fajardo, G. Serrano, J. Guitelman, and F. J. Penedo, “An electronic health intervention for latina women undergoing breast cancer treatment (my guide for breast cancer treatment): Protocol for a randomized controlled trial,” *JMIR Research Protocols*, vol. 8, no. 12, 2019.

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B. R. Yanez, D. Buitrago, J. Buscemi, F. Iacobelli, R. F. Adler, M. E. Corden, A. Perez-Tamayo, J. Guitelman, and F. J. Penedo, “Study design and protocol for My Guide : An e-health intervention to improve patient-centered outcomes among Hispanic breast cancer survivors,” *Contemporary Clinical Trials*, vol. 65, pp. 61–68, feb 2018.

F. Iacobelli, R. F. Adler, D. Buitrago, J. Buscemi, M. E. Corden, A. Perez-Tamayo, F. J. Penedo, M. Rodriguez, and B. R. Yanez, “Designing an mHealth application to bridge health disparities in Latina breast cancer survivors: a community-supported design approach,” *Design for Health*, vol. 2, pp. 1–19, apr 2018.

B. R. Yanez, D. Buitrago, J. Buscemi, F. Iacobelli, R. F. Adler, M. E. Corden, A. Perez-Tamayo, J. Guitelman, and F. J. Penedo, “Study design and protocol for My Guide : An e-health intervention to improve patient-centered outcomes among Hispanic breast cancer survivors,” *Contemporary Clinical Trials*, vol. 65, pp. 61–68, feb 2018.

D. Buitrago, C. Maciel, N. Shivaprakash, J. Buscemi, A. Perez-Tamayo, Y. Castro, R. F. Adler, F. Iacobelli, M. Rodriguez, P. Frank, and B. Yanez, “Development of a Patient-Centered Smartphone Application for Hispanic Breast Cancer Survivors,” in *Oral Presentation at The 14th International Conference of the Society for Integrative Oncology*, (Chicago, IL), 2017.

R. F. Adler, F. Iacobelli, and Y. Gutstein, “Are you convinced? A Wizard of Oz study to test emotional vs. Rational persuasion strategies in dialogues,” *Computers in Human Behavior*, vol. 57, pp. 75–81, 2016.

V. R. Martínez, L. E. Perez, F. Iacobelli, S. Suarez Bojórquez, and V. M. Gonzalez, “Semi-Supervised Approach to Named Entity Recognition in Spanish Applied to a Real-World Conversational System,” in *proceedings of the 7th Mexican Conference on Pattern Recognition (MCPRI5)*, 2015.

- V. Martínez, L. Pérez, F. Iacobelli, S. Bojórquez, and V. González, *Semi-supervised approach to named entity recognition in Spanish applied to a real-world conversational system*, vol. 9116. 2015.
- R. F. Adler, F. Iacobelli, and Y. Gutstein, “Are You Convinced? A Wizard of Oz Study to Test Emotional vs. Rational Persuasion Strategies in Dialogues,” in *Proceedings of the 10th International conference on Persuasive Technology PERSUASIVE 2015*, 2015.
- J. Chaney, A. Fiss, F. Iacobelli, and P. E. J. Carey, “Balancing Graduate School and Family,” in *In GPS for Graduate School: Students Share Their Stories*. (M. J. T. Smith and M. M. Browne, eds.), ch. 6, 2014.
- G. Alastair and F. Iacobelli, “Generative Topic Modeling for Concept Understanding,” in *Proceedings of the 14th meeting of the Society for Text and Discourse.*, 2014.
- F. Iacobelli and B. A. Culotta, “Too neurotic, not too friendly: Structured personality classification on textual data,” in *AAAI Workshop - Technical Report*, vol. WS-13-01, 2013.
- F. Iacobelli and B. A. Culotta, “Too Neurotic, Not too Friendly: Structured Personality Classification on Textual Data,” in *ICWSM Workshop on Personality Classification*, 2013.
- F. Iacobelli, *Augmenting News Stories With Distinct Information*. ProQuest, UMI Dissertation Publishing, jul 2012.
- F. Iacobelli, N. Nichols, L. Birnbaum, and K. Hammond, “Information finding with robust entity detection: The case of an online news reader,” in *Human Computer Interaction: The Agency Perspective. Studies in Computational Intelligence*, vol. 396, pp. 375–387, 2012.
- F. Iacobelli, A. Gill, S. Nowson, and J. Oberlander, “Large scale personality classification of bloggers,” *Proceedings of the 4th international conference on Affective computing and intelligent interaction*, pp. 568–577, 2011.
- A. Gill, F. Iacobelli, and N. Gilbert, “The Projection of Quality and Reputation in Scholarly Journal Description,” *21<sup>st</sup> meeting of the Society for Text and Discourse*, 2011.
- F. Iacobelli, L. Birnbaum, and K. Hammond, “Synergy Between Automatic Content Generation and Social Media,” in *Third workshop on Mashups, Enterprise Mashups and Lightweight composition on the web (MEM2010) at WWW2010*, (Raleigh, NC. USA), apr 2010.
- F. Iacobelli, “Purposeful and Distinct Information. The Case of Online News.” Presentation at Yahoo! Research, 2010.
- F. Iacobelli, N. Nichols, L. Birnbaum, and K. Hammond, “Finding new information via robust entity detection,” in *AAAI Fall Symposium - Technical Report*, vol. FS-10-07, 2010.
- J. Paterson, C. Lange, I. Akhtar, F. Iacobelli, P. Anderson, and A. Leonhard, “Exploring the use of computational linguistics for automated formative feedback in the humanities,” in *eAssessment Scotland (EAS2010)*, sep 2010.

J. Paterson, C. Lange, I. Akhtar, F. Iacobelli, P. Anderson, and A. Leonhard, “Exploring The Use Of Computational Linguistics For Automated Formative Feedback In The Humanities,” in *International Conference of Education, Research and Innovation (ICERI) 2010*, pp. 5303–5312, nov 2010.

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F. Iacobelli, N. Nichols, L. Birnbaum, and K. Hammond, “Finding New Information via Robust Entity Detection,” *Artificial Intelligence*, pp. 32–37, 2010.

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New Scientist, “Finding the facts that online news leaves out.” <http://bit.ly/ba0PpB>, mar 2010.

F. Iacobelli, L. Birnbaum, and K. J. Hammond, “Tell me more, not just more of the same,” in *IUI ’10 Proceedings of the 15th international conference on Intelligent user interfaces*, pp. 81–90, 2010.

F. Iacobelli, K. J. Hammond, and L. Birnbaum, “MakeMyPage: Social Media Meets Automatic Content Generation,” in *3rd International Conference of Weblogs and Social Media*, (San Jose, CA), may 2009.

F. Iacobelli, A. J. Gill, S. Nowson, and J. Oberlander, “Classification of Personality In Large Blog Data,” in *19th Annual Meeting of the Society for Text and Discourse*, jul 2009.

F. Iacobelli, K. Hammond, and L. Birnbaum, “Make My Page: Social Media in Context.” Presentation at the LSAMP AGEF Conference, Purdue University, 2008.

F. Iacobelli and J. Cassell, “Ethnic Identity and Engagement in Embodied Conversational Agents,” in *Intelligent Virtual Agents*, vol. 4722 LNCS, pp. 57–63, 2007.

F. Iacobelli and J. Cassell, “Ethnic Identity and Engagement in Embodied Conversational Agents,” in *Intelligent Virtual Agents*, vol. 4722 of *Lecture Notes in Computer Science*, ch. 6, pp. 57–63, Springer-Verlag, Berlin Heidelberg, 2007.

F. Iacobelli and P. Tepper, “Annotation Tools for Gesture Analysis.” Presentation at the International Society for Gesture Studies (ISGS) Conference, Northwestern University, jul 2007.

D. Huffaker, J. Jorgensen, F. Iacobelli, P. Tepper, and J. Cassell, “Computational measures for language similarity across time in online communities,” in *ACTS ’09: Proceedings of the HLT-NAACL 2006 Workshop on Analyzing Conversations in Text and Speech*, (Morristown, NJ, USA), pp. 15–22, Association for Computational Linguistics, 2006.