

Nora Patricia Hernández López

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Research interests

AI (in) education; STEAM education; Learning analytics; Learning science; Bayesian Methods

Education

2021 – Present	The University of Hong Kong – Hong Kong Ph.D., Education Supervisor: Dr. Xiao Hu; Co-supervisors: Dr. Samuel K. W. Chu, Dr. Gary K. W. Wong
2018 – 2020	Tecnológico de Monterrey – Mexico M.Sc., Computer Science Supervisor: Dr. Jorge Adolfo Ramírez Uresti <i>GPA: 97/100.</i>
2018 – 2020	Universidad del Valle de México – Mexico M.Ed., Innovation and Educational Technology <i>GPA: 9.5/10.</i>
2011 – 2016	Tecnológico de Monterrey – Mexico B.Eng., Mechatronics <i>GPA: 92/100.</i>

Professional experience

2022-present	Impact Analytics (Digital Skill Development Consultant) – Hong Kong I co-design data collection plans for partner institutions, lead quantitative data analysis using inferential and Bayesian statistics, and apply data science to map the theory of change in selected projects.
2016-2017, 2020	Aerobot Planet (co-founder, project developer) – Mexico I co-founded a start-up company dedicated to delivering STEAM educational programs for youth between 8 and 14 years old. I co-created the curriculum for summer immersive camps and programming courses.

- 2016 **Ternium (Quality Specialist)** – Mexico
I revised the requirements for ISO/TS:16949 certification in the production line. I monitored complaint solutions and customer service satisfaction. I implemented a data analysis engine to deliver relevant product quality insights for the Quality Assurance team.
- Jul-Dec 2015 **Ternium (Production Intern)** – Mexico
My project monitored and reduced fuel consumption in the re-heat process prior to the milling of steel wires. I effectively led eight operational teams for practice-based quality assurance and operational safety practices.

Selected honours and scholarships

- 2022 ALiTE Fellows Programme for Doctoral Students 2022-23 (The University of Hong Kong, Hong Kong)
- 2021 Hong Kong Ph.D. Fellowship 2021/22 (Research Grants Council, Hong Kong)
- 2021 HKU Presidential Ph.D. Scholarship 2021/22 (The University of Hong Kong, Hong Kong)
- 2018 National Post-graduate Scholarship (CONACyT, Mexico)
- 2018, 2011 Academic Excellence Scholarship (Tecnológico de Monterrey, Mexico)

Journal Articles

- 2026 **Collaborating with classmates and AI to create music pieces: A topic modeling and sentiment analysis approach**
Under review.
Ng, D.T.K., **Hernández López, N. P.**, Hu, X.
- 2025 **Interaction patterns in AI Education: A comparison of two contexts**
Under review.
Hernández López, N. P., Hu, X., Ng, D.T.K.
- 2025 **Computing Education Meets the Arts: Insights from a Systematic Review**
Under review.
Hernández López, N. P., & Hu, X.

Peer-reviewed Conference Proceedings

- 2025 **Insights from Culturally Relevant AI Education Programme for Secondary School Students**
In *26th International Conference on Artificial Intelligence in Education (AIED25)*.
Hernández López, N. P., & Hu, X., Ng, D.T.K. DOI: [10.1007/978-3-031-98465-5_35](https://doi.org/10.1007/978-3-031-98465-5_35)
- 2025 **WekiMusic: Machine Learning Music Activities to Foster Constructionist AI Education**
In *2025 IEEE International Conference on Advanced Learning Technologies (ICALT)*.
Hernández López, N. P., & Hu, X. DOI: [10.1109/ICALT64023.2025.00035](https://doi.org/10.1109/ICALT64023.2025.00035)
- 2025 **Perceptions of Learning Analytics Dashboard and Their Associations with Online Professional Learning Outcomes for College Teachers in the Global South**
In *2025 IEEE International Conference on Advanced Learning Technologies (ICALT)*.
Wang, C., Hu, X., **Hernández López, N. P.** DOI: [10.1109/ICALT64023.2025.00040](https://doi.org/10.1109/ICALT64023.2025.00040)
- 2024 **Preliminary Evaluation of Learning Analytics Dashboard for College Teachers' Online Professional Learning**
In *The 24th IEEE International Conference on Advanced Learning Technologies (ICALT24)*. Wang, C., Ng, J.T.D., **Hernández López, N. P., Hu, X.** DOI: [10.1109/ICALT61570.2024.00030](https://doi.org/10.1109/ICALT61570.2024.00030)
- 2024 **Culturally Relevant Artificial Intelligence Education with Music for Secondary School Students**
In *25th International Conference on Artificial Intelligence in Education (AIED24)*.
Hernández López, N. P., & Hu, X. DOI: [10.1007978-3-031-64312-5_46](https://doi.org/10.1007978-3-031-64312-5_46)
- 2024 **Needs Analysis of Learning Analytics Dashboard for College Teacher Online Professional Learning in an International Training Initiative for the Global South**
In *14th International Conference of Learning Analytics and Knowledge (LAK24)*. Wang, C., Hu, X., **Hernández López, N. P., Ng, J.T.D.** DOI: [10.1145/3636555.3636932](https://doi.org/10.1145/3636555.3636932)
- 2023 **What Can Students Learn From Their Own Data? Data Literacy With Student-Facing Learning Analytics**
In *17th International Conference of the Learning Sciences (ICLS) 2023*. **Hernández López, N. P., & Hu, X.** DOI: [10.22318/icls2023.579283](https://doi.org/10.22318/icls2023.579283)

- 2023 **Student-facing Learning Analytics for Data Literacy: Findings from an Integrative Review**
In *13th International Conference of Learning Analytics and Knowledge (LAK23)*.
Hernández López, N. P., & Hu, X. DOI: [10.13140/RG.2.2.27533.04327](https://doi.org/10.13140/RG.2.2.27533.04327)

Book Chapters

- 2024 **Understanding Learning in Culturally Relevant Artificial Intelligence Education**
Hernández López, N.P.. In Dimitriadis, Y., Cerezo, R., Balderas, A., Martínez-Monés, Spikol, D. (Eds.), *Doctoral Consortium of the Learning Analytics Summer Institute Europe 2024 (LASI Europe 2024 DC)*. CEUR Workshop Proceedings. <https://ceur-ws.org/Vol-3738/>
- 2019 **Razonamiento estadístico**
Estrada Real, A. & **Hernández López, N.P.** Razonamiento estadístico. (2019). In Francisco Cantú & Rocío Aldeco (Eds.), *Razonamiento Computacional* (pp.63-102). Academia Mexicana de Computación, A.C. <https://amexcomp.mx/media/publicaciones/conocimiento-y-razon-comp.pdf>

Other Research Outputs

- 2023 **Research Brief: Understanding School Leadership Models**
Hernández López, N. P., & Chian, M. M. (2023). *Research brief: Understanding school leadership models*. Academy for Leadership in Teacher Education. Available at: <https://www.alite.edu.hku.hk/post/research-brief-understanding-school-leadership-models>
- 2020 **Hybrid Recommender System for a Context Aware Recommendation in the Film Domain**
Master Thesis.
- 2020 **A Context Hybrid Bayesian Model for Recommendations**
Hernández López, N.P. y Ramírez Uresti, J.A.
Personal and Ubiquitous Computing.

Professional Training

- 2024 **Doctoral Consortium**
25th International Conference of Artificial Intelligence in Education (AIED24) – Recife, Brazil

2024	Doctoral Consortium Learning Analytics Summer Institute Europe 2024 (LASI Europe 2024) –Jerez de la Frontera, Spain
2023	Learning Analytics Summer Institute (LASI) – Singapore <i>Awarded with Erik Duval Scholarship</i> Society for Learning Analytics Research; National University of Singapore
2023	Bayesian Statistics for Social and Health Scientists in R and Python – Online Institute for Statistical and Data Science
2022	Learning Analytics Summer Institute (LASI) – Canada, online <i>Awarded with Erik Duval Scholarship</i> Society for Learning Analytics Research; University of British Columbia

Conference Presentations

2022	IEEE International Conference on Teaching, Assessment and Learning for Engineering (TALE) – Hong Kong <i>Second Runner Up: TALE 2022 Interdisciplinary Postgraduate Student Forum</i> The Hong Kong Polytechnic University
2022	Forum for Social Experiments for AI in Education – China <i>Presentation: Computing Education meets the Arts: Preliminary results from a systematic review</i> Graduate School of Education, Peking University
2020	Congreso de Investigación y Desarrollo (CIDTEC) – Mexico <i>Poster presentation: A Context Hybrid Bayesian Model for Movie Recommendations</i> Tecnológico de Monterrey

Public Presentations & Talks

March, 2024	Brown Bag Seminar: AI and its implications for Education – Hong Kong Unit of Social Contexts and Policies for Education, Faculty of Education, The University of Hong Kong
March, 2023	Panel de discusión: El papel de la mujer en la ciencia – Hong Kong <i>Discussion Panel: The role of women in science</i> Consulate General of Mexico in Hong Kong

Other Conference Participation

- 2022 **International Conference of the Learning Sciences (ICLS)** – Japan, hybrid
Attendee
- 2021 **International Society for Music Information Retrieval (ISMIR) Conference** –
online
Volunteer
- 2016 **INCmty** – Mexico
Participant: Bus Challenge (Innovation and entrepreneurship bootcamp)

Technical Skills

Programming languages

Proficient in: R, Matlab, Python
Familiar with: Javascript

Software

Weka, Advanced MS Office, Autodesk Inventor, Adobe CC (Premiere, InDesign),
L^AT_EX, Git

Languages

Spanish (native), English (fluent), German (basic)

Continuous Education

- 2020 Improving Your Statistical Questions – Eindhoven University of Technology (Coursera)
- Improving Your Statistical Inferences – Eindhoven University of Technology (Coursera)
- Introduction to Relational Database and SQL – (Coursera)
- Big Data Analytics: Opportunities, Challenges and the Future – Griffith University (Future Learn)
- Learning and Memory: Understandings from Educational Neuroscience – Central Queensland University (Future Learn)
- Big Data and Language – KAIST (Coursera)

The Science of Wellbeing – Yale University (Coursera)

Creative Writing: The Craft of Plot – Wesleyan University (Coursera)

COVID19 Data Analysis Using Python – (Coursera)

2019 Recommender Systems Specialisation – University of Minnesota (Coursera)

Probabilistic Graphical Models – Stanford University (Coursera)

2018 R programming – Johns Hopkins University (Coursera)

2014 The Language of Hollywood: Storytelling, Sound, and Color – Wesleyan University (Coursera)

Other Interests

Science Communication, Probability & Statistics, Statistical reasoning, Cognitive Science, Linguistics