

# Nora Patricia Hernández López

noraphl@connect.hku.hk • nora@noraphl.me • <https://noraphl.me>

## Research interests

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

## Education

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

## Professional experience

- |                 |   |
|-----------------|---|
| 2022-present    | <b>Impact Analytics (Digital Skill Development Consultant)</b> – Hong Kong<br>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 | <b>Aerobot Planet (co-founder, project developer)</b> – Mexico<br>I co-founded a start-up company dedicated to delivering STEAM educational programs for youth between 8 and 14 years old.<br>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 (Tecnologico 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: [10.1007/978-3-031-64312-5\\_46](https://doi.org/10.1007/978-3-031-64312-5_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  
*Awarded with Erik Duval Scholarship*  
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  
*Awarded with Erik Duval Scholarship*  
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  
*Second Runner Up: TALE 2022 Interdisciplinary Postgraduate Student Forum*  
The Hong Kong Polytechnic University
- 2022 **Forum for Social Experiments for AI in Education** – China  
*Presentation: Computing Education meets the Arts: Preliminary results from a systematic review*  
Graduate School of Education, Peking University
- 2020 **Congreso de Investigación y Desarrollo (CIDTEC)** – Mexico  
*Poster presentation: A Context Hybrid Bayesian Model for Movie Recommendations*  
Tecnologico 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  
*Discussion Panel: The role of women in science*  
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<sup>A</sup>T<sub>E</sub>X, 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