Adelson D. de Araújo jr

PLACE AND DATE OF BIRTH:	Natal, Brazil, 26 March 1995
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EDUCATION

10/2020 - 12/2024   **Ph.D.**, INSTRUCTIONAL TECHNOLOGY
University of Twente, the Netherlands
"Clair: Guiding Productive Student Dialogue with a Collaborative Conversational Agent"
Supervisors: Prof Dr Ton de Jong, Prof Dr Susan McKenney, Dr Pantelis Papadopoulos

07/2017 - 09/2019   **M.Sc.**, COMPUTER SCIENCE
Federal University of Rio Grande do Norte, Brazil
"Predspot: Predicting Crime Hotspots with Machine Learning"
Supervisors: Dr Nelio Cacho, Dr Leonardo Bezerra

07/2016 - 06/2018   **B.Eng.**, COMPUTING ENGINEERING
Federal University of Rio Grande do Norte, Brazil
"A Framework for Crime Hotspot Detection in Smart Cities"
Supervisor: Dr Nelio Cacho

07/2013 - 06/2016   **B.Sc.**, SCIENCE & TECHNOLOGY
Federal University of Rio Grande do Norte, Brazil

WORK EXPERIENCE

09/2020 - 11/2024   PhD candidate at UNIVERSITY OF TWENTE - Enschede, the Netherlands
Developed a conversational agent for group dialogue, conducted three classroom studies
with secondary school students, published papers in excellent journals and conferences
in the field of AI in Education, and helped organize two hackathons.

04/2019 - 08/2020   Data Scientist at PUBLIC MINISTRY OF RIO G. DO NORTE (MPRN) - Natal, Brazil
Developed NLP tools for crime investigation and dashboards to analyze public budget,
managed data lake infrastructure and ETL workflows, and supervised three interns.

10/2015 - 08/2020   Research Assistant at SMARTMETROPOLIS - Natal, Brazil
Researched predictive policing and smart cities, trained spatiotemporal models,
organized research events, presented at conferences and to public safety authorities.

08/2017 - 02/2018   Data Scientist at LAW COURT OF RN - Natal, Brazil
Developed NLP tools to analyze legal petitions.

AWARDS

2024   Hybrid Intelligence Program Mobility Grant (University of Oulu) - $3,000.00

2024   The Learning Agency's Tools Competition Catalyst Award - $50,000.00
Project name: "Collaborative Learning Agent for Interactive Reasoning" (Clair)

2021   LAK'21 Conference Doctoral Consortium Scholarship - $500.00

2019   Google *Latin America Research Award* (LARA) - $12,000.00
Project name: "Towards Interpretation and Interaction of Predictive Policing Systems"

2018   Google *Latin America Research Award* (LARA) - $6,000.00
Project name: "Automating Patrol Planning by Learning from Crimes and News"

Journal publications

de Araujo, A., Papadopoulos, P. M., McKenney, S., de Jong, T. (2025). *Investigating the impact of a collaborative conversational agent on dialogue productivity and knowledge acquisition.* Under review.

de Araujo, A., Papadopoulos, P. M., McKenney, S., de Jong, T. (2024). *A learning analytics-based collaborative conversational agent to foster productive dialogue in inquiry learning.* Journal of Computer Assisted Learning, 1-15. (PDF)

de Araujo, A., Papadopoulos, P. M., McKenney, S., de Jong, T. (2023). *Automated coding of student chats, a trans-topic and language approach.* Computers and Education: Artificial Intelligence, 4, 100123. (PDF)

Kounadi, O., Ristea, A., **Araujo, A.**, Leitner, M. (2020). *A systematic review on spatial crime forecasting.* Crime science, 9(1), 1-22. (PDF)

Conference proceedings

de Araujo, A., Martens, J., Papadopoulos, P. M. (2024). *Enhancing student dialogue productivity with learning analytics and fuzzy rules.* 25th International Conference on Artificial Intelligence in Education (AIED'24) (PDF)

de Araujo, A., Papadopoulos, P. M., McKenney, S., de Jong, T. (2023). *Supporting Collaborative Online Science Education With a Transferable and Configurable Conversational Agent.* 16th International Conference on Computer-Supported Collaborative Learning (CSCL) (PDF)

de Araujo, A., Cacho, N., Bezerra, L., Vieira, C., Borges, J. *Towards a Crime Hotspot Detection Framework for Patrol Planning.* Proceedings of the 16th International Conference on Smart City, Exeter, UK. IEEE, 2018. (PDF)

de Araujo, A., et al (2020). *A platform for citizen cooperation during the COVID-19 pandemic in RN, Brazil.* In 2020 IEEE international smart cities conference (ISC2). (PDF)

de Araujo, A., et al (2017). *A predictive policing application to support patrol planning in smart cities.* In 2017 International smart cities conference (ISC2). (PDF)

Technical Stack

Programming Languages:	Python, SQL, and a bit of Java, C++, R.
Machine learning frameworks:	Keras and Scikit-Learn.
Data modalities:	Text, Audio, Time series, Geospatial, Logs.
Web frameworks:	FastAPI, Flask.
ETL pipelines:	Airflow, Hadoop, PowerBI.

Teaching

"Concurrent and Parallel Programming" (20h) at Federal University of Rio G. do Norte (2019)
"Introduction to IT: Software, Hardware and Peopleware" (10h) at Natal's Police Department (2018-2019)

Languages

Portuguese, English.

Miscellaneous

2023-2024:	Coordination team of UTwente's research network AI and Data in Education.
2023:	PhD project featured at the Npuls magazine.
2018:	Research visit at Urban Observatory (Newcastle University, UK)).
2017:	Internship at UFRN's supercomputer (NPAD).
2017:	Founding vice-president of student consulting company Include Engenharia.