

# Adelson D. de Araújo jr

## PERSONAL DATA

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PLACE AND DATE OF BIRTH: Natal, Brazil, 26 March 1995  
ADDRESS: H.C. Pootstraat 56, 7552WP, Hengelo, the Netherlands  
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## EDUCATION

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10/2020 - Current **Ph.D. (now attending)** in TECHNOLOGY ENHANCED LEARNING  
University of Twente, the Netherlands  
*"Conversational Agents for Collaborative Science Learning"*  
Supervisors: Ton de Jong, Susan McKenney, Pantelis Papadopoulos

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

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

07/2013 - 06/2016 Undergraduate in SCIENCE & TECHNOLOGY  
Federal University of Rio Grande do Norte, Brazil  
Scope: Math, Physics, Eletronics and Programming

## WORK EXPERIENCE

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04/2019 - 08/2020 Data Engineer at PUBLIC MINISTRY OF RIO G. DO NORTE (MPRN) - Natal, Brazil  
Responsibilities (a) managed on-premises data lake infrastructure with HDFS and multiple ETL workflows, (b) developed NLP tools for crime investigation, (c) designed dashboards to analyse public budgeting distribution.

10/2015 - 08/2020 Research Assistant at SMARTMETROPOLIS - Natal, Brazil  
Responsibilities: (a) researched and implemented predictive policing tools/scripts for crime predictive analysis; (b) helped to organize international academic events.

## PERSONAL AWARDS

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2018 **Google's Latin America Research Award (LARA)** project funding  
Project name: "Automating Patrol Planning by Learning from Crimes and News"

2019 **Google's Latin America Research Award (LARA)** project funding  
Project name: "Towards Interpretation and Interaction of Predictive Policing Systems based on Machine Learning"

## LANGUAGES

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PORTUGUESE: Mothertongue.  
ENGLISH: Speaks fluently.  
DUTCH: Starting to learn.

## PROGRAMMING LANGUAGES

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PYTHON: Writes fluently.  
R, JAVA, C++: Not so experienced, only with small projects.

## PROGRAMMING FRAMEWORKS

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MACHINE LEARNING: Expertise with time series analysis, spatial analysis, and NLP.  
I mostly use Tensorflow, HuggingFace, scipy, scikit-learn.  
Of course willing to learn other frameworks as well.  
DATA WRANGLING: Jupyter and Pandas (+5 years actively using it).  
WEB SERVICES: Flask, FastAPI.  
DATA PIPELINES: Hadoop HDFS, Apache Ni-Fi, cron jobs, Dremio, PowerBI.

## RECENT ONLINE TRAINING

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DEEPLARNING.AI + COURSERA: Natural Language Processing Specialization (2021).

## SELECTED PUBLICATIONS

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

**Araujo, A.**, Cacho, N., Thome, A. C., Medeiros, A., Borges, J. (2017). A predictive policing application to support patrol planning in smart cities. In 2017 International smart cities conference (ISC2) (pp. 1-6). IEEE. ([PDF](#))

**de Araujo, A.**, Garcia, I., Cacho, N., ... Lopes, F. (2020). A platform for citizen cooperation during the COVID-19 pandemic in RN, Brazil. In 2020 IEEE international smart cities conference (ISC2) (pp. 1-8). IEEE. ([PDF](#))

## REFERENCES

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Supervisor	Ton de Jong (a.j.m.dejong@utwente.nl)
Supervisor	Susan McKenney (susan.mckenney@utwente.nl)
Dialy supervisor	Pantelis Papadopoulos (p.papadopoulos@utwente.nl)
Previous supervisor	Nélio Cacho (neliocacho@dimap.ufrn.br)
Research colleague	Ourania Kounadi (ourania.kounadi@univie.ac.at)