

# José Hilario

AI/ML ENGINEER · DATA SCIENTIST · AI/ML RESEARCHER AND DEVELOPER

English (Fluent) | Spanish (Fluent) | French (Advanced) | Dutch (Basic) | Hebrew (Basic)

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«If I am not for myself, who will be for me? And since I am for myself: what am I becoming? And if not now, when?»

## Summary

I am an AI/ML Engineer with two years of experience in the field and five years of previous experience as a Software Developer. My main career interests are: 1) R&D on Deep Learning, Machine Learning, Reinforcement Learning, Game Theory and Combinatorial Optimization; 2) delivering end-to-end AI/ML solutions to production, and effectively evolving and maintaining them using MLOps principles.

I firmly believe in caring and in taking responsibility in life; every action we take should be for the sake of moving towards the right direction.

## Experience

### Cogniware s.r.o.

Prague, Czechia

ARTIFICIAL INTELLIGENCE RESEARCHER AND DEVELOPER

Apr 2020 - Present

- **Responsibilities:** Taking research outputs to production; pursuing an increased maturity of AI/ML projects; adoption of MLOps; AI/ML theory research (documenting, prototyping, data analysis, error analysis); AI/ML technologies research; mentoring
- **Topics:** Deep Learning (attention-based models, GANs...); Machine Learning (Random Forests, NMF, SVD...); Social Networks Analysis (homogeneous/heterogeneous networks, community detection, structural types detection); Computer Vision (object detection and tracking, pedestrian attribute recognition, facial transformations); Fake News Detection (user interactions graph, NLP...); Anomaly Detection in Graphs.
- **Technologies:** PyTorch, TorchServe, Captum, PyTorch Ignite, Ax, Albumentations, Einops, MLflow, Scikit-learn, Hummingbird.

### Czech Technical University in Prague (CTU)

Prague, Czechia

ARTIFICIAL INTELLIGENCE RESEARCHER AND DEVELOPER

Sep 2019 - Apr 2020

- Algorithmic Game Theory and Machine Learning research; Integrating Deep Learning into Combinatorial Optimization algorithms.

### Intellisys D. Corp

Santiago, Dominican Republic

SOFTWARE DEVELOPER

Aug 2014 - Mar 2020

- **Responsibilities:** Fullstack development at Senior level; Design of training programs; Mentoring; Microservices; AB testing; Data migrations.
- **Technologies:** Webpack; nodejs; php; TypeScript; React; JavaScript ES6; HTML; CSS; Google AMP; Chrome Extensions.

### Mother and Teacher Pontifical Catholic University (PUCMM)

Santiago, Dominican Republic

RESEARCH ASSISTANT

Aug 2012 - Jun 2013

- Design and analysis of: power electronics, linear control theory, embedded systems.

## Education

### Czech Technical University in Prague (CTU)

Prague, Czechia

DOCTOR OF PHILOSOPHY - PHD: COMPUTER SCIENCE, UNFINISHED

2019 - 2020

- **Topics:** Deep Learning; Deep Reinforcement Learning; Algorithmic Game Theory; Multi-agent Systems.

### Czech Technical University in Prague (CTU)

Prague, Czechia

MASTER OF SCIENCE - MS: ARTIFICIAL INTELLIGENCE, 1.49 CZ GPA (3.38 US GPA)

2017 - 2019

- **Topics:** Statistical Data Analysis; Pattern Recognition and Machine Learning; Statistical Machine Learning; Symbolic Machine Learning; Probabilistic Graphical Models; Theory of Algorithms; Advanced Algorithms; Combinatorial Optimization; Graph Theory; Algorithmic Game Theory; Multi-agent Systems; Planning for Artificial Intelligence; Logical Reasoning and Programming; Artificial Intelligence in Robotics.

### Mother and Teacher Pontifical Catholic University (PUCMM)

Santiago, Dominican Republic

BACHELOR OF ENGINEERING - BE: ELECTRONICS AND AUTOMATION, 3.8 US GPA

2008 - 2013

- **Topics:** Embedded Systems; Power Electronics; Linear Control Theory; Biomedical Electronics; Linear Systems Analysis; Instrumentation.

## Complementary Education

### Coursera (DeepLearning.AI)

Online

MACHINE LEARNING ENGINEERING FOR PRODUCTION (MLOPS) SPECIALIZATION

2021

- **Topics:** Data/Model/Deployment Pipelines; Managing ML Production Systems; Project Scoping and Design; Concept Drift; ML Metadata; Data Transformations/Validation; Fairness Indicators; Explainable AI; Baselines; Performance Analysis; Monitoring; ML Engineering for Production.

### Udacity

Online

COMPUTER VISION NANODEGREE

2021

- **Topics:** Image Recognition and Segmentation; CNNs/RNNs; Object Detection (YOLO, Faster R-CNN); Image Captioning; Object Motion and Tracking (motion models, video analysis); Optical Flow and Feature Matching; Robot Localization (Bayesian statistics); Graph SLAM.