



# Maciej Milanowski

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**About me:** I am a Database Engineer at Moody's Analytics with a master's degree in Power Engineering from the Technical University of Valencia. Currently, I am focusing on developing Data Science and Machine Learning skills. In addition, recently, I published a scientific article on a mathematical model of a geothermal system prototype developed in collaboration with the Institute of Energy from my former University.

## WORK EXPERIENCE

08/11/2021 – current – Prague, Czechia

**DATABASE ENGINEER** – Moody's Analytics

Developing and maintaining databases with historical time series (FAME, SQL) • Automating data extraction and entry processes (Powershell, Python) • Data scraping and manipulation with Python • Work with APIs of the different data providers • Responding to clients' inquiries Collaboration with the Research team • Redacting KB articles for Data Buffet®

01/07/2020 – 01/09/2020 – Poznan, Poland

**SOLAR PV DESIGNER** – Hot Solar

Design of photovoltaic installations <10 kW using AutoCad, PVsyst, K2base, and more • Design and execution of installation projects • Consulting technical issues with the clients • Prepare documentation regarding the installation projects • Work with K2 base mounting systems and others • Experience with SolarEdge optimizers and Axitec modules

01/04/2019 – 04/06/2019 – Prague, Czechia

**ASSISTANT ENGINEER** – ZEVO Malesice

Erasmus+ internship at a waste incineration plant with energy recovery:

Validation of the SCADA system improvements • Preparing documentation regarding GHG emissions vs green energy production for carbon tax adoption • Assisting the monitoring of the exhaust gases at the chemical lab

01/07/2018 – 01/08/2018 – Munich, Germany

**ENGINE ASSEMBLY TECHNICIAN** – BMW Group

Assisting the construction of BMW 4- and 6- cylinder engines • Inspect equipment to identify the cause of errors or other problems or defects • Work in a team with German speakers

## EDUCATION

01/09/2019 – 16/07/2021 – Valencia, Spain

**MASTER IN POWER ENGINEERING** – Polytechnic University of Valencia

**Studies profile:** Power, Energy and Electrical engineering, renewable energy technologies, and energy efficiency.

Instrumentation & Automation • Techno-economical assessment • Energy markets • Smart grids • Hybrid systems • Monitoring

Thesis: "Energy assessment and optimization of a novel geothermal heat pump system using TRNSYS"

01/10/2015 – 27/03/2019 – Poznań, Poland

**BACHELOR IN RENEWABLE ENERGIES** – The Life Sciences University in Poznań

Mechanics • Electrotechnics and Electronics • Economics • Statistics • Mathematics • Hydraulics and Pneumatics • Technical Drawing • Engines and cogeneration • Water turbines • Solar energy technologies • Cost and finance for engineers

**Thesis:** "Energy audit and a design of a photovoltaic system for an industrial facility"

01/09/2017 – 15/06/2018 – Valencia, Spain

**ERASMUS+** Polytechnic University of Valencia

Two semesters on Erasmus+ student exchange program at UPV:

Work on team projects • Developing communication skills • Work with foreign students from different cultural backgrounds • Classes in Spanish and English

*Please, review the courses I completed on the next page.*

## CERTIFICATES

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05/2023

**DATA SCIENTIST** – Datacamp – profile <https://www.datacamp.com/profile/Milanomac>

Data manipulation • Statistics • Data Analysis • Supervised & Unsupervised ML models • Numpy, Pandas, Seaborn, Matplotlib, Sklearn  
<https://www.datacamp.com/completed/statement-of-accomplishment/track/0cfe0b70cf62be4c1c9ae700390b09a6f7f42698>

08/2022

**MATHEMATICAL BIOSTATISTICS BOOT CAMP 1 & 2** – John Hopkins University

Probability and statistical concepts used in data analysis • Confidence intervals • R programming • Bootstrapping introduction  
<https://coursera.org/share/b5a3d7b60bd771055af22fec942536cc>

07/2022

**DEEP LEARNING ESSENTIALS WITH KERAS** – IBM

Understanding and building deep learning models and networks using Keras • Project: Stock price prediction  
[https://www.credly.com/badges/3c47753b-faf9-4475-90ad-40cdbc6b378e?source=linked\\_in\\_profile](https://www.credly.com/badges/3c47753b-faf9-4475-90ad-40cdbc6b378e?source=linked_in_profile)

09/2021

**INTRODUCTION TO CLOUD DEVELOPMENT WITH HTML5, CSS3 and JAVASCRIPT** – IBM

[https://www.credly.com/badges/b2a9d329-6764-478a-8587-0d0bc8472889?source=linked\\_in\\_profile](https://www.credly.com/badges/b2a9d329-6764-478a-8587-0d0bc8472889?source=linked_in_profile)

08/2021

**AWS – Getting started with cloud security** – AWS on EDX

<https://courses.edx.org/certificates/028ad06b9d2241f180d911d05d33a41c>

08/2021

**PYTHON BASICS FOR DATA SCIENCE** – IBM

<https://courses.edx.org/certificates/2c28138f4adf4623811c0de8dd3c01e4>

[https://www.credly.com/badges/c34b2463-ad59-474e-85f3-4762c7e364be?source=linked\\_in\\_profile](https://www.credly.com/badges/c34b2463-ad59-474e-85f3-4762c7e364be?source=linked_in_profile)

08/2021

**PYTHON BASICS FOR DATA SCIENCE** – IBM

<https://courses.edx.org/certificates/2c28138f4adf4623811c0de8dd3c01e4>

[https://www.credly.com/badges/c34b2463-ad59-474e-85f3-4762c7e364be?source=linked\\_in\\_profile](https://www.credly.com/badges/c34b2463-ad59-474e-85f3-4762c7e364be?source=linked_in_profile)

05/07/2020 – 19/08/2020

**THE ECONOMICS OF ENERGY TRANSITION PROFESSIONAL CERTIFICATE** – Delft University of Technology

<https://courses.edx.org/certificates/4bf42986067044fc8bbf7ef6d03007c3>

## LANGUAGE SKILLS

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**Mother tongue:** Polish

<b>English:</b> Proficient (C1)	<b>Spanish:</b> Proficient (C1)	<b>Czech:</b> Advanced (B2)	<b>German:</b> Intermediate (B1)
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## DIGITAL SKILLS

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Python: Numpy, Pandas, Seaborn, Matplotlib, Sklearn • SQL • FAME • Powershell • TRNSYS • Microsoft Office + VBA • PLC Programming (Siemens TIA) • Autocad

## CREATIVE WORKS & PUBLICATIONS

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11/2020 – 01/2022

**Podcast: Una Energía Nada Corriente**

If you are interested in sustainability and new technologies and you know Spanish, I invite you to the podcast I used to host with my friends, Una Energía Nada Corriente! <https://twitter.com/uencpodcast>

11/2022

**Research Paper: Energy Analysis and Cost-Effective Design Solutions for a Dual-Source Heat Pump System in Representative Climates in Europe**

<https://www.mdpi.com/1996-1073/15/22/8460>