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| Matey Nedyalkov | menedyalkov@gmail.com  https://www.linkedin.com/in/matey-nedyalkov-541b731a8/ https://github.com/Matu-code/Matey\_Portfolio |

# Education

Bachelor in Data science & AI – Breda University of applied sciences– Breda, the Netherlands September 2022 - Present

# Skills

* SQL (PostgreSQL)
* Python (Pandas, NumPy, SciPy, MatPlotLib, seaborn, sklearn, nltk, opencv, speechrecognition)
* Tensorflow
* PyTorch
* Microsoft (Word and PowerPoint)
* R
* Microsoft Power BI
* Azure
* Databricks
* Time-series forecasting

# Experience

Machine Learning Intern – EcoVadis – Barcelona, Spain August 2024 – January 2025

* **Enhanced time series forecasting** model by implementing hyperparameter tuning on LightHBM, boosting model performance and forecast precision to meet strategic business objectives.
* **Conducted extensive feature engineering** to refine model inputs, directly addressing and fulfilling stakeholder requests for more accurate predictive analytics.
* **Initiated and developed a binary classification project** from scratch using the LightGBM framework, aiming to identify key predictions in business-critical datasets.

# Projects

[Interactive Power bi dashboard](https://github.com/Matu-code/Data-Analysis) – University Project

* Developed an interactive Power BI dashboard focusing on analyzing pollution data in China and India, aligned with Sustainable Development Goals (SDGs)
* Gathered and analyzed relevant data to create intuitive visualizations, with a minimalistic design approach for user-friendliness.

[Machine learning regression algorithm](https://github.com/Matu-code/Machine-learning) – Working for Banijay (production company)

* Collaborated with Banijay to analyze and improve TV show ratings using machine learning algorithms.
* Utilized Pandas and visualization libraries (matplotlib, seaborn, bokeh) for data preprocessing and visualization (EDA)
* Implemented regression algorithms (Linear Regression, Decision Tree Regressor) to identify key features influencing show ratings.
* Drafted a comprehensive report covering project methodology and ethical considerations.

[Deep learning image classification algorithm](https://github.com/Matu-code/Deep-learning) – freelancing project

* Engaged as a freelancer to develop an image classification project for bird and flower identification.
* Conducted marketing research to ensure the usability of the application.
* Employed TensorFlow and Keras to create a Convolutional Neural Network (CNN) with data augmentation and transfer learning capabilities.
* Conducting Error Analysis by using LIME and GradCam.
* Designed a prototype using Proto.io for demonstration purposes.

[Machine learning classification algorithm](https://github.com/Matu-code/Machine-Learning-Group-project) – working for municipality of Breda

* Collaborated with a team to create an application predicting crime rates in different neighborhoods of Breda for the municipality.
* Responsible for preprocessing, visualizing data, and drafting a data quality report.
* Contributed to developing clustering and classification models, including hyperparameter tuning with Optuna.
* Assisted in deploying the project, particularly focusing on the data analysis page.
* Deployed the project with streamlit.

[Analytics translator](https://github.com/Matu-code/Analytics-translator) – Integrating AI into facility management program in Buas (working for Buas)

* Worked with stakeholders to understand goals, challenges, and needs regarding AI integration into the facility management program at BUas
* Conducted data analysis using R, employing mixed-method research (qualitative and quantitative)
* Researched predictive maintenance impact and contributed to writing a policy paper on AI integration.

[Machine learning engineer](https://github.com/Matu-code/Machine-learning-engineer-CV) – cOmputer vision and robotics – working for NPEC

* Utilized traditional computer vision techniques to preprocess images and identify root tips.
* Integrated deep learning models for root tip identification and traditional controller for robotic guidance.
* Collaborated within a robotics environment to guide water delivery to root tips.

[Machine learning engineer](https://github.com/Matu-code/Machine-learning-engineer-NLP) – natural language processing – working for Banijay

* Implemented preprocessing techniques such as tokenization and stemming for text data.
* Employed word embedding for vector representations and various models (Logistic Regression, Naive Bayes, RNN, Transformer) for NLP tasks.
* Applied speech-to-text models using the speechrecognition library.
* Contributed to writing a technical report covering the project, particularly focusing on the data aspects.

[Machine learning engineer](https://github.com/Matu-code/Azure) – DEPLOYMENT – working for NPEC

* Collaborated as a key team member, taking full responsibility for aspects related to **Azure cloud services**.
* Successfully deployed the machine learning model using two deployment strategies:
* **Standard deployment** to establish a production-ready environment.
* **Blue/Green deployment** to enable seamless updates while minimizing downtime and risks.

[Kaggle](https://github.com/Matu-code/Kaggle) – Modeling – Kaggle competitions

* I sometimes participate in Kaggle competitions for fun as I use this opportunity to practice my modelling skills.
* Using different models such as XGBRboost, CatBoost, Lightgbm and ensemble.
* Using hyperparameter tuning such as GridSearchCV and Optuna.