Portfolio overview (last update April 2020)

Programming Projects	Machine Learning/AI Projects
• An app in Java for the management of travel orders of Paris-Dauphine University's professors-researchers - using a geolocation API (Agile methodology using GitHub, Travis CI & Maven) • The study of the N-Body problem in celestial mechanics in Python • The study of the double pendulum and its chaotic motion in dynamical systems in Python • A simulator of assembler language in C • An airport manager in C • A time-sharing processor allocation simulator in Java • A soccer team composition after designing and featuring MCDM algorithms in Python (Graded 18,5/20)	• Portuguese Wine Quality Prediction using PCA and multilinear regression with Numpy • Implementation of LDA, Logistic Regression and its regularization (Lasso, Ridge) with scikit-learn and Numpy • Implementation of classifiers evaluations with Numpy • Implementation of a multi-features randomized logistic regression from scratch including automated visualization of hyperparameters tunings (learning rate, Lasso and Ridge regressions) • Implementation of a LSTM neural network which aimed at predicting laser signal in a recursive fashion – including hyperparameters tuning (batch normalization, learning rates, optimizers etc.) including an explanation of the architecture chosen in a report – programmed with Keras in Tensorflow 2.0 • Information retrieval & Text Mining project to connect the community of investigators researching novel coronavirus (in progress) – tools used: NLP libraries, Neo4j and Stanford Core NLP • Knowledge Graphs project: "Financial trends prediction from sentiment-analysis of knowledge graphs built from tweets and financial indicators on the S&P 500" (graded 9/10) – technologies and tools used: LSTM neural networks, various API, several python scripts, RDF mapping files, SPARQL queries, statistical and financial analysis – including a project report

Research projects
• Master's research project (in progress) titled "*Decoding Speech from Invasive Brain Activity*", in partnership with the Department of Neurosurgery and Data Science of Maastricht University

For additional information on my projects, you can contact me by email.