Emine Cerit, PhD

A mechanical engineering manager with vast managerial experience looking for transitioning into Data Science by bringing my strong analytical and problem-solving skills as well as my earned skills in Python, Data Analytics, SQL and Machine Learning

Kontakt:
Fichtelbergstraße 36, 70469, Stuttgart | 0049 176 62986605| emncerit@gmail.com |
linkedin.com/in/emine-cerit | github.com/EmineCerit

EXPERIENCE

OMDENA – California , USA (Remote)

Machine Learning Engineer April 2021– Aug 2022

- **AI to Reduce Food Waste:**
  - Performed instance segmentation the MaskRCNN algorithm.
  - Achieved annotation and data labeling for AI training
  - Reviewed/wrote code for existing programs and integrated existing datasets

- **Building a Recommendation Engine to Increase Energy Efficiency in Buildings:**
  - Built a machine learning classification model on the internal data for to predict the ROI range for LED retrofitting projects in buildings around the USA with the f1-score of 0.807.

Moving to Germany, Parental Leave, Further Education Aug 2017 – …

VAILLANT GROUP -Turkey

R&D Manager (Simulation, Patent, Subsidy Management)* & *R&D Engineer Apr 2008 – Aug 2016

- Managed a cross-functional team of 6 people and led simulation activities including CFD and FEM analysis.
- Followed pre-processing, numerical modelling, visualization and optimization steps for the simulation projects.
- Reported and presented projects of high complexity simply with necessary and sufficient information.
- Published 3 articles, 4 proceedings in different conferences and 2 scientific translations.

PROJECTS (more details at https://eminecerit.github.io/EmineCerit.gitgub.io/)

Urban Sounds Classification

- Implemented a CNN algorithm to classify urban sounds based on 8732 labeled sound excerpts from 10 classes
- Converted sound excerpts to spectrograms using librosa library
- Performed gray scale conversion, resizing and normalization on the spectrograms

House Price Prediction

- Examined the performance of regression algorithms (GBM, Random Forest, XGBoost, Light GBM) by applying RMSE metrics to predict prices based on 81 features and found Light GBM to have the best performance
- introducing +10 new attributes, resulting in increase in R^2 score from 86% to 90%
- Performed Exploratory Data Analysis and conducted feature engineering studies
- Conducted automated hyperparameter tuning and applied stacking & ensemble learning
- Visualized data using Tableau and Python libraries, created a dashboard

RFM vs. K-Means in Customer Segmentation

- Compared RFM and K-Means for a customer segmentation case based on online retail data. 10 and 6 clusters emerged with RFM technique and K-Means technique, respectively. As a result, the results obtained with the K-Means Technique were slightly more comprehensive than those obtained with the RFM.

Sentiment Analysis and Modeling for Amazon Reviews

- Conducted sentiment analysis in order to classify the negative and positive reviews of the customers for the products in the electronics category of Amazon.

- Implemented a regression model (Random Forest) with the 90% f1 score to predict whether a new comment is negative or positive is by using word vectorization methods as count vectors, TF_IDF and TF-IDF N-Gram

EDUCATION

Veri Bilimi Okulu
- Data Science and Machine Learning Bootcamp — Dec 2021 – Mar 2022

Women AI Academy
- Data Science Digital Learning Cycle — Mar 2021 – May 2021

Eskisehir Osmangazi University – Turkey
- Doctor of Philosophy (Ph.D.) Mechanical Engineering, Energy & Thermodynamics — Feb 2007 – Dec 2010
- Master of Science in Mechanical Engineering, Energy & Thermodynamics — Sep 2004 – June 2006
- Master of Science in Industrial Engineering, Engineering Management — Sep 2004 – June 2006
- Bachelors of Science in Mechanical Engineering — Sep 1999 – June 2004

CERTIFICATIONS & TRAINING

Microsoft
Azure Fundamentals, Azure Data Fundamentals, Azure AI Fundamentals — Mar 2023

Udacity
AWS Machine Learning Foundations — Nov 2022

İstanbul Data Science Academy
Google Cloud Fundamentals : Core Infrastructure — Mai 2022

MIUUL
NLP, Production Level Data Science, SQL Programming with SQLite — Apr 2022
Big Data, Machine Learning with Spark — Mar 2022
Feature Engineering — Feb 2022
Statistics for Data Science, Data Visualization — Nov 2021

Global AI Hub
Introduction to Deep Learning — Sep 2021
Deep Learning Bootcamp — Oct 2022

SKILLS

- Python (Pandas, Numpy, Scikit-learn, Matplotlib, Seaborn, NLTK)
- Databases (MS SQL Server)
- Tableau, Power BI

Languages: Turkish (Native), English, German (B2)