# METODI SIMEONOV

I have over 10 years of experience in the IT Services industry with background in large cross-cultural projects in multiple domains. I have had the opportunity to lead projects in traditional and sequential, ITIL framework and as of recently, I have been involved in delivering Agile MVPs with quick turnaround time.

Currently, I am looking for opportunities that allows me to build tools with R and Python leveraging a combination of visualization, machine learning, and data engineering to help customers explore and understand their data in new and meaningful ways.



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# **EDUCATION**

2020 2016

# B.S., Psychology and Cognitive Science

New Bulgarian University

Sofia. BG

- · Thesis: Big Five personality dimensions and job satisfaction as predictors
- · Developed regression model in R for evaluating and testing hypotheses.
- · Highlighted Coursework: Statistics, Statistical Data Analysis, Experimental Psychology, Cognitive Modeling.

2009 2006

# B.S., Marketing

MTM College Sofia

Sofia. BG

· Highlighted Coursework: Statistics, Higher Maths, Finance, Data Analysis, Marketing Research.

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CONTACT

 $\smile$ 

# INDUSTRY EXPERIENCE



# Data Science & Analytics Consultant

# Hitachi Solutions Europe

Sofia. BG

- · Working as a full stack data scientist on variety of projects primarily in the field of forecasting and classification modeling. Building up a pan-European DevOps practice driving the expansion of data science portfolio. Using jupyter notebooks to upskill team members with practical ML projects.
- · Using Shiny and Dash to integrate R and Python into containerized predictive web applications deployed to the Azure cloud. Using Azure DevOps for backlog and version (Git) control. Using Docker for application isolation and deployment.
- · Participating in data migration and modernization projects with Azure Data Factory, Synapse, SQL and Power BI integration.

# LANGUAGE SKILLS

R	
SQL	
Python	

Made with the R package pagedown.

The source code is available on github.com/Met0o/cv.

Last updated on 2022-01-06.

2020 | 2020

# **Business Intelligence Developer**

Hewlett Packard Enterprise

**♀** Sofia, BG

- Developed end-to-end machine learning algorithm written in R to forecast demand for one of HPE's GreenLake strategic deals. Used combination of Kwiatkowski-Phillips-Schmidt-Shin (KPSS) and augmented Dickey-Fuller (ADF) tests to evaluate hypotheses and determine stationarity of the time series. Output of the algorithm include standard accuracy metrics such as RMSE, MAPE, MASE and MAE.
- Participated in the development of real-time streaming analytics solution for monitoring of Salesforce cases, orders, and escalations. Used Azure SQL DB to store live data feed from Kafka consumer, connected with direct query to a Power BI dashboard presenting instant view of the data.
- Developed Salesforce connector with R for on demand extraction of objects and fields using complex SOQL queries and API calls (REST & BULK) wrapped in functions, thus automating traditional salesforce reporting and data extraction for large volumes of data (+30 million rows).
- Collaborated with the business to maintain and update critical company tools, ensuring the proper use of KPIs and metrics. Updated and automated SQL Views and SSIS packages used for data loads of millions or records.

2020 | 2018

# **Business Analyst**

**DXC Technology** 

Sofia, BG

- · Analyzed organizational and business domain specific processes and systems, assessed the business model and its integration with technology within the boundary of Workplace and Mobility of Offering Delivery & Transformation.
- Developed Power BI dashboards to monitor headcount attrition and turnover, employee distribution, skillset, and active project assignments.
- Worked with global L5 management team to drive business decisions, leveraging data from Salesforce, SAP Business Objects, and other internal systems.

2018 | 2016

# **Solution Consultant**

Hewlett Packard Enterprise

- · Identified and validated opportunities to accelerate consumption in high potential customer accounts. Drove solution architecture in partnership with the delivery teams. Enabled the customer to envision their environment and services, while leveraging the greater DXC and partner resources (internal teams and partners).
- Provided technology leadership for development of Future Mode of Operation solution designs and functional migration plans. Closely cooperated with Account Teams, Subject Matter Experts, Chief Engineers, Operations, Delivery and Clients.
- $\cdot$  Worked with financial data during pre-sales. Created cost models and revenue plans.

# **CERTIFICATES** DS4B 201-R: Data Science For Business With R 2021 Sofia, BG **Business Science University** DS4B 203-R: High Performance Time Series Forecasting 2021 Sofia, BG **Business Science University** DS4B 102-R: Web Applications with R-Shiny 2021 Sofia, BG **Business Science University** DP-900: Microsoft Azure Data Fundamentals 2021 Sofia, BG Microsoft **AZ-900: Azure Fundamentals** 2021 Sofia, BG Microsoft DS4B 101-R: R for business analysis 2021 Sofia, BG **Business Science University** Distributed Computing with Spark SQL 2020 Sofia, BG Coursera Data Wrangling, Analysis and AB Testing with SQL 2020 Sofia, BG Coursera Advanced R Programming 2020 Sofia, BG Coursera Building Interactive Apps With Shiny and R 2020 Sofia, BG Udemy Programming with R 2020 Sofia, BG Coursera **Qlik Sense Data Architect Masterclass** 2020 Sofia, BG Udemy MCSA: Machine Learning 2019 Sofia, BG Microsoft 773: Analyzing Big Data with Microsoft R 2019 Sofia, BG Microsoft 774: Perform Cloud Data Science with Azure Machine Learning 2019 Sofia, BG Microsoft



- Friendly, collaborative and open-minded
- Able to translate business requirements to technical deliverables
- Autonomous, adaptable, flexible and resilient
- Creative with lateral thinking
- Strong interpersonal skills
- Able to communicate effectively at all levels
- Can do attitude

# WORK REWARDS / RECOGNITIONS Received exceed expectations during my first 6 months at Hitachi Solutions Manager-to-Employee Program: Innovators at Heart Manager-to-Employee Program: Bias for Action

Recognition for successful transition of portfolio services from large UK telecom to HPE in 2016

# PROJECT PORTFOLIO

2021 • Equity Trading Forecast Analysis

Sofia, BG

- Worked on a POC consultancy project for a FinTech company where I developed a forecasting solution in R for predicting equity trading volumes. Used variety of nested and ensembled models to process multiple time series in parallel.
- · Blueprints of the soltution without the code can be demoded here:
- · https://rpubs.com/MetodiSimeonov/Superlearner
- · https://rpubs.com/MetodiSimeonov/Nested
- · https://rpubs.com/MetodiSimeonov/Results

# 2021 • Employee Attrition Analysis

2021

Sofia, BG

- Developed predictive analysis in R to target employee attrition. Used variety of tree based and ensemble models in H2O, embedded as a notebook in Azure Machine Learning.
- Created custom set of metrics for exec level stakeholders targeting model interpretability and explainability with the help of the LIME library.
- $\cdot$  Developed KPIs based on results to address the prevention and reduction of employee turnover.
- · Sample of the analysis can be viewed here: https://rpubs.com/MetodiSimeonov/Attrition

# Marketing Mixed Modeling with Robyn

Sofia, BG

• Used the R open-source Robyn package developed by Facebook to model marketing allocation and spending strategy for optimizing ROI.

### **Credit Score Prediction** 2021

Sofia, BG

- · Developed R-Shiny web app to assess the default risk (probability) using TabNet in Pytorch and XGBoost to compare results and performance.
- · Link to the web app -
- https://metodisimeonov.shinyapps.io/Loan\_Credit\_Score/

### 2021 **Customer Lifetime Value Web App**

Sofia. BG

- · Developed R-Shiny CLV web app using data from now defunct music store.
- · Link to the web app -
- · https://metodisimeonov.shinyapps.io/Customer\_Lifetime\_Value/

### Nestted Forecaster Web App 2021

Sofia, BG

- · Developed R-Shiny Product Forecasting App for the M5 Forecasting Accuracy challenge on Kaggle using XGBoost, Prophet and Random Forest models.
- · Link to the web app -
- https://metodisimeonov.shinyapps.io/Nested\_Forecaster/

### **Hierarchical Forecaster Web App** 2021

Sofia, BG

- Developed R-Shiny Product Exploration App for the M5 Forecasting Accuracy challenge on Kaggle using an ensemble approach comprising of XGBoost and Lightgbm models.
- · Link to the web app -
- https://metodisimeonov.shinyapps.io/Hierarchical\_Forecaster/

### 2021 **Customer Explorer Web App**

Sofia. BG

- · Developed R-Shiny web app that aggregates customer purchasing behavior into a convenient tool.
- · Link to the web app -
- https://metodisimeonov.shinyapps.io/Customer\_Explorer/

### Predictive Web Apps with R-Shiny 2021

- · Developed R-Shiny web apps for scalable deployments leveraging embedded machine learning for price prediction and revenue forecasting.
- · Link to the web app -
- · Forecasting App using XGBoost https://metodisimeonov.shinyapps.io /sales\_dashboard\_forecast\_app/
- Price Prediction App using XGBoost https://metodisimeonov.shinyapps .io/price\_prediction\_app/

2021

# **Time Series Forecasting**

Sofia, BG

- Created complex functions to automate the processing of nested and hierarchical forecasting time series datasets.
- Sample plot can be viewed here https://rpubs.com/MetodiSimeonov/NestedTSPlot

2021

# A/B Testing Analysis

Sofia, BG

- Developed A/B Testing algorithm with R aiming to design experiment framework that is robust and provides repeatable results.
- The results of the analysis can be viewed here https://rpubs.com /MetodiSimeonov/ABTest

2021

# Interactive Customer Segmentation in a 2D Projection

Sofia, BG

- The data in this analysis comes from the S&P 500 Index. Using a method of UMAP 2D projection with K-Means cluster assignment of Customer-Item matrix to classify companies based on how their stocks trade using their daily stock returns (percentage movement from one day to the next). This analysis can help to determine which companies are similar to each other in various segments of the market.
- The results of the analysis can be viewed here https://rpubs.com /MetodiSimeonov/Clustering

2021

# **Customer Segmentation**

Sofia, BG

- Developed customer segmentation algorithm with R to showcase purchasing preferences of a customer-base with heat map visualization and UMAP 2D projection with K-Means cluster assignment of customer-item matrix
- The results of the analysis can be viewed here https://rpubs.com/MetodiSimeonov/CustomerSegmentation

2021

# **Product Pricing Algorithm**

Sofia, BG

- Based on the regression analysis I determined the best performing model and developed Product Pricing Algorithm using XGBOOST to predict the price of 2 new items in existing product gap.
- The model output can be viewed here https://rpubs.com /MetodiSimeonov/ProductPricingAlgorithm

2021

# **Regression Algorithm**

- Developed pricing algorithm with R to determine a new product price in a category gap. Evaluating five different models to determine the price Im, glmnet, decision tree, random forest and xgboost.
- The model output can be viewed here https://rpubs.com /MetodiSimeonov/Regression

## 2021

# COVID-19 Dashboard

Sofia, BG

- This dashboard is built with R using the R Makrdown and flexdashboard framework and was adapted from the dashboard of Rami Krispin, courtesy of Antoine Soetewey. The input data for this dashboard is the dataset available from the {coronavirus} R package. The raw data is pulled from the Johns Hopkins University Center for Systems Science and Engineering (JHU CCSE) Coronavirus repository.
- The dashboard can be viewed as a Shiny web application here https://metodisimeonov.shinyapps.io/COVID-19-Bulgaria-v2/, or as a static HTML here https://rpubs.com/MetodiSimeonov/COVID-19-Bulgaria

# 2020

# Principal Component Analysis (PCA) in R

Sofia, BG

- · Used PCA to extract insights from public dataset.
- Created data visualization plot using plotly that explains clustering segments within the data.
- Visualization can be viewed here https://rpubs.com/MetodiSimeonov/PCA

# 2020

# **Image Processing with Computer Vision**

Sofia, BG

- Used a combination of computer vision neural networks (RVision & OpenCV) for image pre-processing: sharpening, color inversal and deskewing.
- Used Google's Tesseract engine for post-processing: text extraction and translation.

# 2019

# Sentiment Analysis of Twitter Data

Sofia, BG

- Developed R script to source tweets in a SQLite DB for sentiment analysis with the Syuzhet package.
- · Results, plots and code are available on my GitHub.
- Graphical results can be viewed here https://rpubs.com /MetodiSimeonov/NLP

# 2019

# **Hotel Recommendation Engine**

- As part of a regional upskilling program I have created and deployed scalable solution using data from 300k reviews for 1478 hotels across Europe.
- Used combination of R and Azure Machine Learning for data cleansing, feature engineering, model creation and deployment.