

# **NEMANIA BOROVITS**

Data Scientist

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# Professional skills -

Data Analysis:

Programming language: Python. Data engineering: Apache Spark, Apache Kafka, Elastic Stack. Data Visualization:, Plotly Dash, Matplotlib, Seaborn, Kibana. Machine learning: Scikit-learn, NumPy, Pandas, Snorkel. Deep learning: TensorFlow, Keras, PyTorch.

NLP: NLTK, Hugging face Transformers, spaCy, gensim, t-SNE, Snorkel.

Web Crawling: BeatifulSoup

### Cloud Technologies:

Google Cloud Heroku Dataiku Microsoft Azure

**Back-end Development:** 

Data modeling: Microsoft SQL Server, MongoDB **ORM:** nHibernate, Entity Framework. Business Logic: asp .net MVC, asp

API: asp.net Web API 2 (C#), Flask. Web Services: SOAP, RESTful (C#, Python).

Front-end development:

Web skills: HTML5, Javascript, jQuery, AJAX, JSON, CSS, Bootstrap. JS Frameworks: React js, Knockoutjs, VueJs.

# Summary

A passionate Data Scientist from Thessaloniki, Greece located in 's-Hertogenbosch, the Netherlands. I have worked for 5 years as a full-stack developer and data engineer in Greece. Then, I decided to specialize my skill set in the domain of Data Science. After graduating with a Master's in Data Science & Entrepreneurship, I started the journey towards the Ph.D. degree. The scientific domain I specialize in is Data Engineering and AI for Privacy. My Ph.D. is co-financed by the Jheronimus Academy of Data Science and the Dutch Telco provider KPN.

# **Professional Experience**

15/10/2020 Data Scientist

**KPN** 

Member of the Customer Contact Analytics department and the KPN Data Science Lab.

Involved in Natural Language Processing projects analyzing call center text data in the Dutch Language. Collaborating with subject matter experts and business stakeholders in order to set, assess and ideate over business KPIs. Collaborating with Data and MLOps engineers to optimize the development, testing, deployment, inference and maintenance of the generated models. Following the SCRUM framework for day-to-day project management.

Projects involving unstructured call center text data in the Dutch language:

- 1. Rule-based and NER-based data anonymization.
- 2. Dependency parsing-based and NER-based business-relevant ontology creation.
- 3. Labeling automation through Weak Supervision for text classification.
- 4. Privacy-preserving deep learning for data anonymization and businessrelevant ontology creation.

Projects involving tabular TV viewership data:

1. Validation and evaluation of synthetic data.

15/10/2019 Data Scientist / Research Assistant

31/03/2020

Tilburg University

Performed academic research in the domain of Infrastructure as Code (IaC).

The practical part of the work included:

- 1. Data collection.
- 2. Data verification.
- 3. Data cleaning and preparation.
- 4. Data pre-processing.
- 5. Deep learning model development.
- 6. Model evaluation and tuning.
- 7. Model deployment.

The result of my work is an academic paper that was accepted for the Workshop on Machine Learning Techniques for Software Quality Evaluation (MaLTeSQuE). The carried out research applies Deep Learning (CNN) in order to detect name-based bugs in Infrastructure as Code (IaC).

This work is supported by the European Commission grant no. 825480 (SODALITE H2020) and no. 825040 (RADON H2020).

#### 01/10/2016 Data Engineer

17/08/2018

Mouzenidis Group

Designed, developed and maintained scalable data pipelines for membercompanies of Mouzenidis Group holding.

Main duties included:

1) Design, develop and optimize architectures for data acquisition and storage.



- 2) Develop scripts for database maintenance, monitoring, and performance
- 3) Perform data integrations through Extract Transform Load (ETL) operations.
- 4) Deployment of machine learning models.
- 5) Collaboration with Analytics team in order to meet business goals.

#### 01/10/2014 Full Stack Developer

Mouzenidis Group

30/09/2016

Developed web applications for member-companies of Mouzenidis Group holding.

Main duties included:

- 1) Design and development of server-side (back-end) and client-side (frontend) architecture.
- 2) Management and development of well-functioning databases.
- 3) Security and data protection settings implementation.
- 4) Service-Oriented Architecture design and implementation through web services and APIs.
- 5) Web server management and maintenance.
- 6) Ideation of Web solutions in collaboration with marketing and sales department.

#### 10/04/2013 Junior Web Developer

30/09/2014

Supported development of Mouzenidis Travel's websites.

Main duties included:

Mouzenidis Travel

- 1) Responsive web page redesigning.
- 2) Javascript and CSS optimization.
- 3) Page loading and SEO optimization.
- 4) Modules development for the Mouzenidis Group CMS. (https://cms.mouzenidis.com/adminb).
- 6) Trained personnel from other departments on how to use the Mouzenidis Group CMS.

# **Academic publications**

FindICI: Using machine learning to detect linguistic inconsistencies between code and natural language descriptions in infrastructure-as-code.

DeeplaC: Deep Learning-Based Linguistic Anti-pattern Detection in IaC.

## **Education**

15/10/2020 PhD in Data Engineering and AI for Privacy

Jheronimus Academy of Data Science

27/08/2018 MSc Data Science & Entrepreneurship

Jheronimus Academy of Data Science

10/07/2020

01/10/2006 BSc in Applied Informatics

University of Macedonia

18/07/2012

# Languages

#### Mother tongues:

Greek, Serbian.

### Other languages:

English: IELTS, Proficiency in English (University of Michigan).

Dutch, Russian: Basic communication skills / working knowledge.

# **Organizational Competencies**

Creating and keeping deadlines

Goal setting and meeting goals

Project management

Teamwork

Creative thinking

Strategic thinking

# **Other interests**

Artificial intelligence ethics enthusiast.

Jogging, playing football and basketball, cooking and travelling.