CHRISTOS THEODOROPOULOS

Doctoral Researcher

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EXPERIENCE

Research Scientist Intern
IBM Research

📅 Jul. 2022 – Present   ♦ Dublin, Ireland

- Conduct applied research in personal knowledge graph field with a focus on medical and social applications.
- Experiment with embedding learning for heterogeneous graphs.
- Incorporate graph population approaches using external evidence extrapolation.

Doctoral Researcher
LIIR, KU Leuven

📅 Sep. 2020 – Present   ♦ Leuven, Belgium

- Conduct research in relation extraction field, applied to biomedical and news text with a focus on continual learning.
- Implement a framework using the contrastive learning paradigm, incorporating knowledge graphs and unstructured text.
- Fulfill teaching assistant duties for the "Information Retrieval and Search Engines" course, like preparing and presenting exercise sessions and project assignments.

Machine - Deep Learning Engineer, Researcher
I-SENSE Group, ICCS, NTUA

📅 Mar. 2019 – Sep. 2019   ♦ Athens, Greece

- Worked on an internal project related to eye-tracking and object detection systems.
- Developed advanced Deep Learning architectures for gaze localisation.
- Implemented process for GAN quality evaluation using pre-trained Deep Learning models and Random Forest classifier.
- Performed data pre-processing and manipulation for the unification of images datasets related to driving conditions.

Data Scientist
Sentio Solutions Inc.

📅 Mar. 2018 – Jul. 2018   ♦ Athens, Greece
- Developed proprietary algorithms for signal processing of HRV, related to signal reconstruction and quality estimation.
- Created procedure for data retrieval from cloud storage space.

EDUCATION

KU Leuven
Doctor of Philosophy - PhD, Artificial Intelligence

📅 Sept. 2020 – Present   ♦ Leuven, Belgium

- Research Areas: Natural Language Processing, Information Extraction, Continual Learning, Deep Learning
- Supervisor: prof. Marie-Francine Moens

KU Leuven
Advanced MSc, Artificial Intelligence

📅 Sept. 2019 – Aug. 2020   ♦ Leuven, Belgium

- Grade: 81.17%, Magna Cum Laude - Great Distinction

National and Technical University of Athens
Integrated BSc & MSc, Electrical & Computer Engineering

📅 Oct. 2012 – Oct. 2018   ♦ Athens, Greece

- Grade: 81.8%, Great Distinction
- Concentration: Computer Science

TECHNICAL SKILLS

Python   Matlab   C   Keras
PyTorch   Scikit-learn   OpenCV
Numpy   Pandas   Matplotlib   Linux

PROJECTS

Automatic denoising of resting-state fMRI

- Designed and developed a Deep Learning framework using 3D CNN and LSTM layers for artifact removal of resting-state fMRI.
- Handled spatial and temporal information by implementing a weighted voting schema.
- Achieved comparable to state-of-the-art performance.

Emotion recognition

- Manipulated video data annotated with emotion markers using Deep Learning and Transfer Learning techniques for emotion recognition through facial expressions.
- Approached the problem as classification and regression based on the emotional space (valence-arousal).

Churn prediction

- Implemented a Machine Learning framework for churn prediction, working with official masked customer data, given by an established greek telecommunication company.
- Experimented with different classifiers and achieved over 88% accuracy by segmenting the customers to different risk groups.

Credit card fraud detection

- Developed a supervised learning model based on Random Forest classifier for fraud detection, handling the unbalanced data problem.

HONORS & AWARDS

- FWO PhD fellowship, Research Foundation Flanders, Selected by a pool of 100 applicants
- Scholarship, MSc studies, Bodossaki Foundation
- Scholarship, MSc studies, Eugenides Foundation

PUBLICATIONS

- Imposing Relation Structure in Language-Model Embeddings Using Contrastive Learning, CoNLL 2021, first author
- Automatic artifact removal of resting-state fMRI with Deep Neural Networks, EUSIPCO 2021, first author

LANGUAGES

Greek   ●●●●●
English   ●●●●○