DESPOINA TOUSKA

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PROFILE

Machine Learning Research Engineer with 3 years of expertise in researching and developing AI software, specializing in Computer Vision techniques. My skill set includes a solid foundation in software development using Python, C, C++, JavaScript, SQL, and other programming languages that I acquired through my studies and work experience. I am passionate about exploring AI solutions, in object detection, object tracking, activity recognition and other fields.

EDUCATION

Aristotle University of Thessaloniki Thessaloniki, Greece
M.Eng in Electrical and Computer Engineering *October 2013 - April 2020*

- Cumulative GPA: 8.35/10
- Relevant Coursework: Pattern Recognition, Parallel & Distributed Systems, Probabilities & Statistics, Data Structures, Structured Programming, Robotics, Database Systems

Centre for Research and Technology Hellas (CERTH) Thessaloniki, Greece
Collaboration for thesis completion *November 2018 - September 2019*

- Thesis: Video Forgery Detection using Autoencoder and Recurrent Neural Networks (link)
- Grade: 10/10

EXPERIENCE

Centre for Research and Technology Hellas (CERTH) Thessaloniki, Greece
Machine Learning Research Engineer *September 2020 - Present*

- Actively contributed to the publication of 8 scientific papers on the topics of object detection, object tracking, and activity recognition at conferences and workshops.
- Developed prototype Data Science pipelines tailored to specific project requirements of EU Horizon projects.
- Implemented API endpoints with tools (Kafka and RabbitMQ) for service monetization and seamless integration with partner systems.
- Automated model deployment; dockerizing them, setting up the required dependencies, and deploying them to a server.

Instituto Superior de Engenharia do Porto (ISEP) Porto, Portugal
Software Developer Intern *October 2019 - February 2020*

- Created a hand gesture dataset with data in a video format using CNNs and a key-point format using PoseNet.
- Developed a prototype web application for data collection, training, and prediction of sign language translation to text through webcam, using Javascript for the frontend and Flask API for the backend.

Centre for Research and Technology Hellas (CERTH) Thessaloniki, Greece
Machine Learning Engineer Intern *March 2018 - May 2018*

- Contributed to the research for a multimedia forensics scientific paper.
- Developed and evaluated ML models for Computer Vision and Natural Language Processing tasks.

INDICATIVE PUBLICATIONS

- **D. Touska**, K. Gkountakos, K. Ioannidis, T. Tsikrika, S. Vrochidis, I. Kompatsiaris. *Graph-Based Data Association in Multiple Object Tracking: A Survey.* MMM2023. 2023.
- Gkountakos, K., **Touska, D.**, Ioannidis, K., Tsikrika, T., Vrochidis, S., & Kompatsiaris, I. *Spatio-temporal activity detection and recognition in untrimmed surveillance videos.* ICMR. 2021.
- Gkountakos, K., Galanopoulos, D., **Touska, D.**, Ioannidis, K., Vrochidis, S., Mezaris, V., & Kompatsiaris, I. *ITI-CERTH participation in ActEV and AVS Tracks of TRECVID 2021.* TRECVID. 2021.
- Zampoglou, M., Markatopoulou, F., Mercier, G., **Touska, D.**, Apostolidis, E., Papadopoulos, S., ... & Kompatsiaris, I. *Detecting tampered videos with multimedia forensics and deep learning.* MMM2019. 2019.

SKILLS

Languages: English (fluent, C2, IELTS: 7.5/9), Greek (native), German (beginner, A2).
Programming Languages: Python (advanced), C/C++, JavaScript, HTML, CSS, SQL.
Libraries: PyTorch, Keras, Tensorflow, TensorFlow.js, OpenCV, NumPy, Pandas, Sci-Kit Learn.
Production Tools: Docker, Apache Kafka, RabbitMQ, REST API, WebSocket API, Postman, Git, GitLab.