



ABOUT
EXPERIENCE
PROJECTS
EDUCATION
SKILLS
DISTINCTIONS
RESEARCH INTERESTS
PUBLICATIONS
ADDITIONAL ACADEMIC ACTIVITIES
INTERESTS

IOSIF ANGELIDIS



ADDRESS



PHONE



EMAIL

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Iosif Angelidis was born in Cholargos, Attica, on 16/06/1993. He is a graduate of the Department of Informatics & Telecommunications of the National and Kapodistrian University of Athens, in the field of «Theoretic Informatics», while he has completed his post-graduate studies in «Data Management». Meanwhile, he is working as a researcher for the projects Nomothesi@ API and Choronomothesia, being a member of Management of Data and Information Knowledge Group ([MADgIK](#)) and Knowledge Representation, Reasoning and Analytics ([KRR&A](#)) group.

In the context of his MSc thesis, «Named Entity Recognition and Linking in Greek Legislation», under the supervision of professor Mr Manolis Koubarakis and PhD Candidate Ilias Chalkidis, he developed and maintained a Named Entity Recognizer which recognizes and extracts persons, organizations, geo-political entities, legal references, public documents and unofficial geographical landmarks found in the Government Gazette by utilizing Neural Networks and Deep Learning technologies. These entities are being encoded as RDF data based on a Semantic Web ontology and then interlinked with other open public datasets (Greek Administrative Geography, Greek DBpedia, Public Buildings) with Silk.

Currently, he keeps further developing, optimizing and maintaining the Named Entity Recognizer component of [Nomothesi@](#).

DOWNLOAD CV



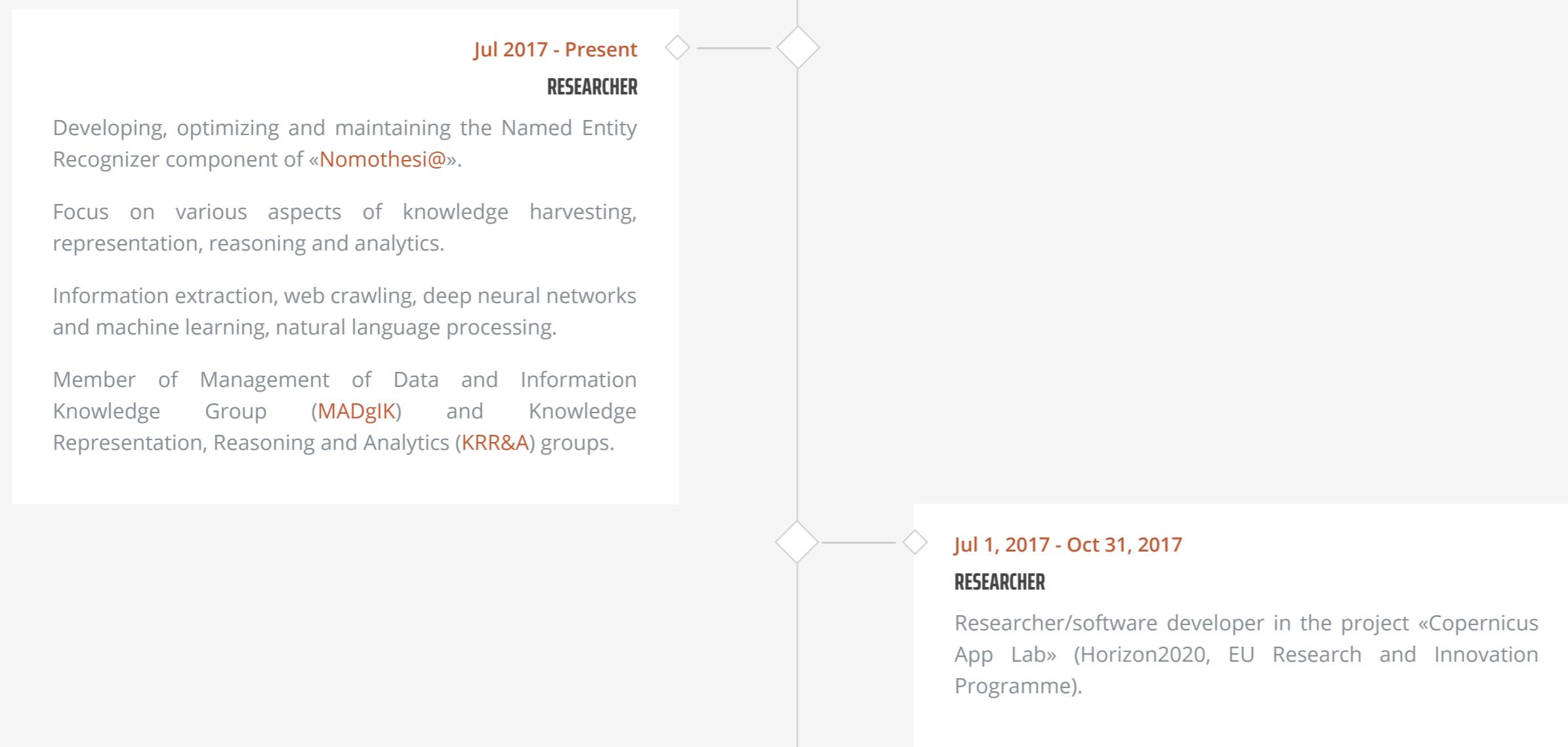
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EXPERIENCE



ABOUT
EXPERIENCE
PROJECTS
EDUCATION
SKILLS
DISTINCTIONS
RESEARCH INTERESTS
PUBLICATIONS
ADDITIONAL ACADEMIC ACTIVITIES
INTERESTS



PROJECTS



NOMOTHESI@

KEYWORDS: LEGISLATIVE KNOWLEDGE REPRESENTATION, OPEN DATA, E-GOVERNMENT, RDF/OWL METADATA, SPRING MVC, UNIVERSAL RESOURCE IDENTIFIERS, REST SERVICES

An important kind of government data is the data related to legislation. Legislation applies to every aspect of people's living and evolves, continuously building a huge network of interlinked legal documents. Therefore, it is important for a government to offer services which make legislation easily accessible to the public, aiming at informing them, enabling them to defend their rights, or use legislation as part of their job. Towards this direction, many European Union (EU) countries have already automated the digitalization process by developing platforms for archiving legislation documents and offering on-line access to them.

Following the successful efforts of other countries throughout Europe, Nomothesi@ project aims at modernizing the way greek legislation is made public and providing high-scale legal services. We envision a new state of affairs in which ordinary citizens have advanced search capabilities at their disposal about legislation. We also envision that legislation is published in such a way that developers can consume it, and so that it can also be combined with other open data to increase its value for interested parties or people. Currently, there is no other effort in Greece or related decisions made by government institutions and administration alike which takes this perspective on legislation into considerations.

Based on the above principles, we developed Nomothesi@, a platform which makes Greek legislation available on the Web as linked open data. Nomothesi@ provides open access in a library of more than 12,000 pieces of legislation, interlinked with approximately 124,400 connections and over 8,000 unique entities, such as geospatial entities, persons, organizations and geographical landmarks (points of interest).

Jul 2017 – Present



AIRBNB-LIKE ANDROID APPLICATION

KEYWORDS: ANDROID DEVELOPMENT, JAVA, AIRBNB, GOOGLE MAPS

The aim of this project was to develop a fully-functional Android application like Airbnb supporting Google Maps API, different user roles, registration and room reservation, as well as hosting rooms.

2017 – 2018



COPERNICUS APP LAB

Geospatial data manipulation and production in the topics of LAI (Leaf Area Index) of Paris (from netCDF format), NO₂, O₃, UV emissions in Europe and oil-spills in Sweden for the Copernicus App Lab in addition to writing of scripts to automate tasks within the group and improve efficiency.

2017 – 2018



NAMED ENTITY RECOGNITION AND LINKING IN GREEK LEGISLATION

KEYWORDS: NAMED ENTITY RECOGNITION AND LINKING, LEGISLATIVE KNOWLEDGE REPRESENTATION, ENTITY REFERENCE REPRESENTATION, LINKED OPEN DATA, DEEP LEARNING, ENTITY GENERATION

We show how entity recognition in Greek legislation texts can be achieved by utilizing a named entity recognizer (NER). Our work is the first of its kind for the Greek language in such an extended form and one of the few that examines legal text. We apply grid search on multiple neural network architectures and combination of hyper-parameters to maximize the efficiency of our approach. We show that, utilizing a big legal corpus we built word/token-shape embeddings using Word2Vec, and finally achieve 86% accuracy on average in recognition of organizations, legal references, geographical landmarks, persons, geo-political entities (GPEs) and public documents. The evaluation of our methodology is based on the metrics of precision, recall, f₁-score per entity type for each neural network. Finally, we measure the ratio of correctly guessed links for the interlinking of RDF datasets produced by our approach with well-known public datasets and how new knowledge can be inferred indirectly by our approach from DBpedia, ELI (European Legislation Identifier) and GAG (Greek administrative geography) of Kallikratis.

2017 – 2018



DEVELOPMENT OF A LENDING LIBRARY WEBSITE WITH USER ROLES AND SHOPPING CART FUNCTIONALITIES

KEYWORDS: WEB DEVELOPMENT, SHOPPING CART, HUMAN-COMPUTER INTERACTION

The aim of this project was to develop a fully-functional lending library website that supports multiple user roles, registration, shopping cart functionalities etc.

2015-2016



COOPERATIVE ROUTING AND SCHEDULING OF AN ELECTRIC VEHICLE FLEET MANAGING DYNAMIC CUSTOMER REQUESTS

KEYWORDS: URBAN COOPERATIVE COMPUTING, ONLINE SCHEDULING FOR ELECTRIC VEHICLE REQUESTS, POWER REFUELING FOR AN ELECTRIC VEHICLE FLEET, GNSS

Environmental issues and consumer concerns have paved the way for governments to legislate and help usher into operation alternative-fueled vehicles and pertinent infrastructures. In the last decade, battery-powered electric vehicles have been introduced and the service industry has followed suit and deployed such trucks in their distribution networks. However, electric vehicles do impose limitations when it comes to their traveling range. Replenishing the power to the vehicle batteries may entail lengthy charging visits at respective stations. In this paper, we examine the problem of routing and scheduling a fleet of electric vehicles that seek to satisfy dynamic pickup and delivery requests in an urban environment. We develop a web application to facilitate cooperation between organizations and individuals involved in urban freight transport. The application uses geolocation services and mobile devices to help manage the fleet and make timely decisions. Moreover, we propose three heuristic recharging strategies to ensure that electric vehicles can restore their energy levels in an effective manner. Through detailed experimentation, we show that the costs associated with the use of an electric vehicle fleet concern mainly the size of the fleet. The impact regarding the total route length traveled is less evident for all our strategies.

2016



CAPACITATED VEHICLE ROUTING WITH TIME WINDOWS

KEYWORDS: VEHICLE ROUTING, TIME WINDOWS, SCHEDULING, TRANSPORTATION, GUIDED LOCAL SEARCH

Capacitated Vehicle Routing Problem with Time Windows is a problem that has troubled academics for many years due to its difficulty (it belongs to the class NP) and many approximate solutions that are fairly sufficient have been proposed. Of course, a plethora of application of those solutions exists in practical applications. The goal of the program documented in the present thesis is to initially solve the problem based on classic methods from bibliography using real geographical data in Earth coords. After that, it communicates with a relational database which contains roads of Athens and info about their direction (unidirectional or bidirectional).

Furthermore, it communicates with an in-memory key-value store which contains additional dynamic info on roads. To be more specific, it contains positive and negative percentage weights that express dynamic roads' info. Positive weights represent traffic and have a value in the range of [0,0,1,0]. Negative weights represent drivers' experience that influences them to follow specific roads because they are aware that they will reach their destination faster that way and have a value in the range of [-0,5,0,0]. Negative weights do not have the same range as positive ones due to intuition as road traffic affects the decisions made a lot more than the driver's experience since a road could have a traffic jam in an unexpected scenario.

During the program's execution messages are being printed explaining algorithmic decision-making in critical parts and saved in intermediate files in order to study the results after execution. Finally, a kml and a html file are produced so that it's possible for the final result to be shown in any application capable of handling kml files (or html if the user wishes to view the visualization on the web). Most common applications capable of handling kml files are Google Earth, Google Maps and Marble.

2015



EDUCATION

NATIONAL AND KAPODISTRIAN UNIVERSITY OF ATHENS, DEPARTMENT OF INFORMATICS AND TELECOMMUNICATIONS

MASTER'S DEGREE

2016-2018

Computer Science - Information and Data Management

Grade: 9.39/10.0

ABOUT

EXPERIENCE

PROJECTS

EDUCATION

SKILLS

DISTINCTIONS

RESEARCH INTERESTS

PUBLICATIONS

ADDITIONAL ACADEMIC
ACTIVITIES

INTERESTS

NATIONAL AND KAPODISTRIAN UNIVERSITY OF ATHENS, DEPARTMENT OF INFORMATICS AND TELECOMMUNICATIONS

2011 - 2016

PTYCHION (4-YEAR DEGREE WITH THESIS)

Computer Science - Theoretic Informatics

Grade: 9.34/10.0

ECDL (SYLLABUS VERSION 4.0)

2007

CERTIFICATE IN DATABASES, CONCEPTS OF IT, WORD PROCESSING, PRESENTATIONS, INFORMATION AND COMMUNICATION, SPREADSHEETS, USING THE COMPUTER AND MANAGING FILES.

SKILLS

SOFT SKILLS

- ✓ Communication
- ✓ Team player
- ✓ Patient

PROGRAMMING LANGUAGES

 C  C++  Java  Python  LUA  Haskell  OpenGL

OPERATING SYSTEMS

 Arch  Debian  Fedora  Linux Mint  Manjaro  Mandriva  Slackware  *ubuntu  Microsoft Windows (95, 98, 2000, XP, Vista, 7, 8, 10)

ABOUT

EXPERIENCE

PROJECTS

EDUCATION

SKILLS

DISTINCTIONS

RESEARCH INTERESTS

PUBLICATIONS

ADDITIONAL ACADEMIC ACTIVITIES

INTERESTS

APPLICATIONS DEVELOPMENT

 Android  HTML 5  CSS 3  PHP  Javascript  jQuery  Ajax  Bootstrap  npm  bower  Gradle

SERVER MANAGEMENT & DATABASES

 Apache Tomcat  Apache HTTP Server/XAMPP  SQL  PostgreSQL  Redis

INTEGRATED DESKTOP ENVIRONMENTS

 IntelliJ  Pycharm  WebStorm  PHPStorm  Visual Studio Code

GEOSPATIAL SYSTEMS

 Sextant  Strabon

GENERAL

 LaTeX  Microsoft office  Presentations  Matlab



ABOUT

EXPERIENCE

PROJECTS

EDUCATION

SKILLS

DISTINCTIONS

RESEARCH INTERESTS

PUBLICATIONS

ADDITIONAL ACADEMIC
ACTIVITIES

INTERESTS

DISTINCTIONS

GREEK STATE SCHOLARSHIPS FOUNDATION (IKY)

SCHOLARSHIP FOR ACADEMIC PERFORMANCE

2011-2012

PANELLINIOS AC

SECOND PLACE CERTIFICATE IN BACKSTROKE 33M

2002



ABOUT
EXPERIENCE
PROJECTS
EDUCATION
SKILLS
DISTINCTIONS
RESEARCH INTERESTS
PUBLICATIONS
ADDITIONAL ACADEMIC ACTIVITIES
INTERESTS

DEEP LEARNING FOR NLP

LEGAL TEXT ANALYTICS

LEGISLATION PUBLISHING, CONTRACT ANALYSIS

INFORMATION EXTRACTION

NAMED ENTITY RECOGNITION AND LINKING

TEXT SEGMENTATION

LEGAL TEXT SEGMENTATION, ZONING, SENTENCE BOUNDARY DETECTION

TEXT CLASSIFICATION

DOCUMENT/SENTENCE CLASSIFICATION

SELF-SUPERVISED DOCUMENT CLASSIFICATION

DATA AUGMENTATION

LEGAL KNOWLEDGE REPRESENTATION

LEGISLATION, CONTRACTS

E-GOVERNMENT – LINKED OPEN DATA

RESEARCH INTERESTS



ABOUT
EXPERIENCE
PROJECTS
EDUCATION
SKILLS
DISTINCTIONS
RESEARCH INTERESTS
PUBLICATIONS
ADDITIONAL ACADEMIC ACTIVITIES
INTERESTS

PUBLICATIONS

I. ANGELIDIS, I. CHALKIDIS, CH. NIKOLAOU, P. SOURSOS AND M. KOURBARIKIS. *NOMOTHEΣΙΑ: A LINKED DATA PLATFORM FOR GREEK LEGISLATION.*

MIREL WORKSHOP, LUXEMBOURG LOGIC FOR AI SUMMIT (LUXLOGAI 2018), LUXEMBOURG, 17 SEPTEMBER, 2018.[\[PUB\]](#)[\[E-PRINT\]](#)[\[BIB\]](#)

I. ANGELIDIS, I. CHALKIDIS AND M. KOURBARIKIS. *NAMED ENTITY RECOGNITION, LINKING AND GENERATION FOR GREEK LEGISLATION.*

THE 31ST INTERNATIONAL CONFERENCE ON LEGAL KNOWLEDGE AND INFORMATION SYSTEMS (JURIX 2018). GRONINGEN, THE NETHERLANDS, 12-14 DECEMBER, 2018.[\[PUB\]](#)[\[E-PRINT\]](#)[\[BIB\]](#)

D. PUNJANI, K. SINGH, A. BOTH, M. KOURBARIKIS, I. ANGELIDIS, K. BERETA, T. BERIS, D. BILIDAS, T. IOANNIDIS, N. KARALIS, C. LANGE, D. PANTAZI, CH. PAPALOUKAS AND G. STAMOULIS. *TEMPLATE-BASED QUESTION ANSWERING OVER LINKED GEOSPATIAL DATA.*

GEOGRAPHIC INFORMATION RETRIEVAL (GIR 2018) WORKSHOP. COLLOCATED WITH ACM SIGSPATIAL. SEATTLE, USA, 6 NOVEMBER, 2018.[\[PUB\]](#)[\[E-PRINT\]](#)[\[BIB\]](#)

P. LIAKOS, I. ANGELIDIS AND ALEX DELIS. *COOPERATIVE ROUTING AND SCHEDULING OF AN ELECTRIC VEHICLE FLEET MANAGING DYNAMIC CUSTOMER REQUESTS.*

PROCEEDINGS OF THE INTERNATIONAL CONFERENCE ON COOPERATIVE INFORMATION SYSTEMS (COOPIS), RHODES, 28 OCTOBER, 2016.[\[PUB\]](#)[\[E-PRINT\]](#)[\[BIB\]](#)

ADDITIONAL ACADEMIC ACTIVITIES



ABOUT

EXPERIENCE

PROJECTS

EDUCATION

SKILLS

DISTINCTIONS

RESEARCH INTERESTS

PUBLICATIONS

ADDITIONAL ACADEMIC ACTIVITIES

INTERESTS

Fall 2018
TEACHING ASSISTANT

Artificial Intelligence, National and Kapodistrian University of Athens,
Department of Informatics and Telecommunications.

Fall 2016
TEACHING ASSISTANT

Operating Systems, National and Kapodistrian University of Athens,
Department of Informatics and Telecommunications.

Fall 2017
TEACHING ASSISTANT

Artificial Intelligence, National and Kapodistrian University of Athens,
Department of Informatics and Telecommunications.

Fall 2015
TEACHING ASSISTANT

Object Oriented Programming Lab (undergrad lab for the corresponding
course), National and Kapodistrian University of Athens, Department of
Informatics and Telecommunications.

2015

SUPERVISION AND DEVELOPMENT OF EDUCATIONAL MATERIAL

Algorithms and Complexity, National and Kapodistrian University of
Athens, Department of Informatics and Telecommunications.

2015

SUPERVISION AND DEVELOPMENT OF EDUCATIONAL MATERIAL

Operations Research, National and Kapodistrian University of Athens,
Department of Informatics and Telecommunications.



ABOUT

EXPERIENCE

PROJECTS

EDUCATION

SKILLS

DISTINCTIONS

RESEARCH INTERESTS

PUBLICATIONS

ADDITIONAL ACADEMIC
ACTIVITIES

INTERESTS

INTERESTS

Apart from being a data scientist, I thoroughly enjoy travelling and visiting archaeological sites.

I strongly believe in the benefits of choosing swimming as a form of exercising over regular gymnastics. I used to go swimming for 6 years in boarding school and have taken a liking to it ever since. Of course, swimming does not have to be limited during summer, if one can endure the cold!

When forced indoors, I like talking about psychology, philosophy, mathematics, history and physics, or watching a good movie with friends (pretty much any genre, from horror to sci-fi to fantasy to comedy). Furthermore, I have been a gamer for a long time. I love playing almost all genres and fancy playing single player titles, or with friends. I definitely enjoy debating about games and their various aspects (gameplay, story, mechanics, gimmicks etc.). Moreover, I am an aspiring DJ with a twist: I seek mostly music featured in games!

I like spending a good amount of my free time exploring the open source community, learning about new technologies and tweaking computer systems.