

Name: Iosif

Surname: Angelidis

Birth: June 16, 1993

Address: University of Athens, 157 84, Ilissia, Athens, Greece

Mobile: +30 694 7747 843

Phone: +30 210 884 3227

e-mail: iosang@di.uoa.gr

# **Further Contact Means**

- Personal Website
- Facebook
- LinkedIn
- GitHub
- GitLab



• V-card:

### **Short summary**

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, his undergraduate dissertation being in the area of "Theoretical Informatics", while he has completed his post-graduate studies in "Information and Data Management". He is 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 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 Politicians, EUR-Lex) with Silk.

Currently, he is a researcher, further developing, optimizing and maintaining the Named Entity Recognizer component he developed for the project Nomothesi@ API. Also, he is working as a researcher in Choronomothesia, a parallel project with the goal of extracting geospatial information and coordinates from tables of legal documents of the National Printing Office of Greece.

## Working experience

- Jul 2017 Present: Researcher:
  - Developing, optimizing and maintaining the Named Entity Recognizer component of "Nomothesi@".
  - Developer and researcher in "Choronomothesia", another project parallel to "Nomothesi@" with the goal of extracting geospatial information and coordinates from tables of legal documents of the National Printing Office of Greece.
  - Focus on various aspects of knowledge harvesting, representation, reasoning and analytics.
  - Information extraction, web crawling, deep neural networks and machine learning, natural language processing.
  - Member of Management of Data and Information Knowledge Group (MADgIK) and Knowledge Representation, Reasoning and Analytics (KRR&A) groups.

• Jul 1, 2017 - Oct 31, 2017: Researcher/software developer in the project "Copernicus App Lab" (Horizon2020, EU Research and Innovation Programme).

#### Additional academic activities

- Fall 2018: Teaching assistant in undergrad "Artificial Intelligence" course, National and Kapodistrian University of Athens, Department of Informatics and Telecommunications.
- Fall 2017: Teaching assistant in undergrad "Artificial Intelligence" course, National and Kapodistrian University of Athens, Department of Informatics and Telecommunications.
- Fall 2016: Teaching assistant in undergrad "Operating Systems" course, National and Kapodistrian University of Athens, Department of Informatics and Telecommunications.
- Fall 2015: Teaching assistant in Object Oriented Programming Lab for "Object Oriented Programming" undergrad course, National and Kapodistrian University of Athens, Department of Informatics and Telecommunications.
- 2015: Supervision/development of educational material for "Algorithms and Complexity" and "Operations Research" undergrad courses, National and Kapodistrian University of Athens, Department of Informatics and Telecommunications.

# **Projects**

- Active developer of the platform Nomothesi@, which functions as a portal of greek legislative text from all legal documents of the National Printing House. We extract legal and geospatial as well as textual references to entities, digitalizing this data as Semantic Web data by utilizing structured/semistructured data with ontologies.
- MSc Thesis "Named Entity Recognition and Linking in Greek Legislation". Supervisors: Manolis Koubarakis (Professor, NKUA), Ilias Chalkidis (PhD Candidate, AUEB). The main focus was on neural networks technologies in the area of natural language processing with the aim of extracting named entities (persons, organisations, legal references, geo-political entities, public documents and unofficial geographical landmarks), converting them into Semantic Web data and then linking them with other third party Semantic Web data (Greek Administrative Geography, Greek DBpedia) using the tool Silk
- Undergrad Thesis "Capacitated Vehicle Routing with Time Windows". Supervisors: Alex Delis (Professor, NKUA), Panagiotis Liakos (PhD, NKUA). The main focus was addressing the titular problem, implement an adapted

 $A^{*}$  program to visualize the shortest paths between stops of the vehicles. To that end, geospatial information was being handled with a Postgres database with PostGIS functionality.

- "Cooperative Routing and Scheduling of an Electric Vehicle Fleet Managing Dynamic Customer Requests". A work in collaboration with Alex Delis (Professor, NKUA) and Panagiotis Liakos (PhD, NKUA). The goal of this project was to develop an online algorithm that uses 3 distinct strategies to optimize routing and scheduling information of an electric vehicle fleet (which requests recharging) and compare all three. The problem addressed here is a new addition to the VRP-family of NP-hard problems.
- Working on an Android app with RESTful services offering a similar functionality to Airbnb for "e-Commerce" class with geospatial functionalities, Google Maps and locating addresses.
- Participation in a 3-member team where the representation of multiple social networks as graphs, graph quries (multi-threaded) and multiple metrics regarding communities and cliques finding were implemented (in C) for "Software Development" undergrad course.
- Development of a lending library website with user roles and shopping cart functionalities for "Human-Computer Interaction" undergrad course.
- Geospatial data manipulation and production in the topics of LAI (Leaf Area Index) of Paris (from netCDF format),  $NO_2$ ,  $O_3$ , UV emissions in Europe and oil-spills in Sweeden for the Copernicus App Lab in addition to writing of scripts to automate tasks within the group and improve efficiency.

#### Education

- 2016-2018: MSc degree in Information and Data Management, National and Kapodistrian University of Athens, Department of Informatics and Telecommunications. Grade: 9.39/10.0.
- 2011-2016: Ptychion (4-year degree with thesis) in Computer Science Theoretical Informatics, National and Kapodistrian University of Athens, Department of Informatics and Telecommunications. Grade: 9.34/10.0.
- 2007: ECDL (Syllabus Version 4.0) certificate in Databases, Concepts of IT, Word Processing, Presentations, Information and Communication, Spreadsheets, Using the Computer and Managing Files.

# Languages

• English: Certificate of Proficiency in English, 2009 University of Michigan, First Certificate in English (Grade B), 2008 University of Cambridge.

• Greek: Native language.

#### **Skills**

- Soft Skills: communication, team player, patient.
- Programming Languages: C, C++, Java, Prolog, Haskell, Assembly (MIPS), Python, LUA, OpenGL, SPARQL/GeoSPARQL/stSPARQL, SMILE.
- Operating Systems: GNU/LINUX (Arch Linux, Manjaro, Debian, \*buntu (Server), Fedora, OpenSuse, Kali/Backtrack, Arch, Mandriva, Mint, Debian, Slackware/Slackel, Puppy), Microsoft Windows (95, 98, 2000, XP, Vista, 7, 8, 10).
- Shell Scripting: bash, fish, zsh, tcsh, csh.
- Applications Development RESTful Web Services, Android Studio development, TLS/SSL protocols, Bootstrap, Sweet Alert, Bootstrap Validator, bower, npm, HTML 5, CSS3, Ajax, jQuery, PHP, Javascript, Gradle, Maven.
- Server Management & Databases: Apache Tomcat, Glassfish, Apache HTTP Server/XAMPP, PHPMyAdmin, MySQL Workbench, PostgreSQL/PostGIS, pgAdmin, Redis.
- Integrated Desktop Environments: Intellij, PyCharm, WebStorm, PHPStorm, Vistual Studio Code, Netbeans.
- Geospatial Systems: Sextant, Strabon.
- Version Control Systems: Mercurial, Git, CVS.
- General: LATEX, Microsoft Office, Matlab.

### **Distinctions**

- 2011: Greek State Scholarships Foundation (IKY) scholarship for academic performance, 2011-2012.
- 2002: second place certificate in backstroke 33m, Panellinios AC.

#### **Publications**

- I. Angelidis, I. Chalkidis, C. Papaloukas and M. Koubarakis. "The Greek Legal Knowledge Graph: A Progress Report". Submitted, 2019. [E-PRINT].
- T. Beris, I. Angelidis, I. Chalkidis, C. Nikolaou, C. Papaloukas, P. Soursos and M. Koubarakis. "Towards a Decentralised, Trusted, Intelligent and Linked Public Sector. A Report from the Greek Trenches". LDOW/LDDL

workshop, The Web Conference (WWW 2019), San Francisco, CA, USA, 13 May, 2019. [PUB][E-PRINT][BIB].

- I. Angelidis, I. Chalkidis, C. Nikolaou, P. Soursos and M. Koubarakis. "Nomothesia: 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. Koubarakis. "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. Koubarakis, I. Angelidis, K. Bereta, T. Beris, D. Bilidas, T. Ioannidis, N. Karalis, C. Lange, D. Pantazi, C. 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, <u>I. Angelidis</u> and A. 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].

# Research 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

#### Hobbies and 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, gimmicksm 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.