

Dimitris Tsitsigkos

Date of Birth: 18 January 1989

Nationality: Hellenic

Address: 34 Zaxaria Papantwniou,
Kato Patissia, Athens, Greece

Phone: +30 210 8315040

Mobile: +30 6942951698

Email: tsitsigkosdim@gmail.com
dtsitsigkos@imis.athena-innovation.gr
dtsitsigk@di.uoa.gr

Webpage: <https://www.imis.athena-innovation.gr/en/people/member/79>

LinkedIn: <https://www.linkedin.com/in/dimitris-tsitsigkos>

Education

November 2012 – September 2016

M. Sc. in Computer Systems Technology
Department of Informatics and Telecommunications
National and Kapodistrian University of Athens
G.P.A: 8,2/10

M.Sc. Thesis: Complex Event Processing(CEP) for Intrusion Detection
Adviser: Prof. Hadjiefthymiades Stathes

September 2006 - June 2012

B.Sc. in Informatics and Telecommunications
Department of Informatics and Telecommunications
National and Kapodistrian University of Athens
G.P.A: 7,7 / 10

B.Sc. Thesis: Clustering Wikipedia resources
Adviser: Prof. Gunopoulos Dimitris

May 2006

High School Graduate : Lycee Leonin of Patisiwn
G.P.A. : 18/20

Research Interests

- Real Time Analytics
- Parallel Algorithms
- Data Mining
- Big Data
- Machine Learning
- Data Anonymization

Theses

May 2016 – November 2016

M.Sc. Thesis: *Complex Event Processing(CEP) for Intrusion Detection*

[Pervasive Computing Research Group \(p-comp\)](#)

Abstract: CEP is an application solution to the problem of security intrusions (anomaly-based intrusion detection) by using streams generated by IoT devices relevant to their network properties in order to detect abnormal behavior and notify the user via an alert. In our case, each device participating in a IoT network is handled as a sensor device that generates streams of network measurements using the Simple Network Management Protocol (SNMP). These measurements are provided as input to the Esper Complex Event Processing framework. I implemented three algorithms to perform anomaly detection, one algorithm with dynamic thresholds, Shewhart Controller Algorithm and Adaptive Resonance Theory Algorithm.

Programming languages: **Java**

January 2012 – September 2012

B.Sc. Thesis: *Clustering Wikipedia resources*

[KDD Lab](#)

Abstract: The goal of this thesis was to crawl and cluster Wikipedia pages into “natural” clusters about a specific topic. I explored different approaches to produce such indicative clusters, including keyword-based, link-based, and possible combinations. The final result was to identify topics on which a Wikipedia writer/contributor is an expert on, using external sources or parts of an article that they have authored.

Programming languages: **Java**

Working Experience

December 2012 - now

Junior Software Engineer (full-time)

Institute for the Management of Information Systems (IMIS)

"Athena" Research and Innovation Center, Athens, Greece

April 2017 – November 2017

Software Development Engineer(full-time)

Hellenic Army Information Technology Support Center (KEPYES), Athens, Greece

As a member of IMIS, I have been involved in the following R&D projects:

August 2015 - now

Amnesia: A Powerful Data Anonymization Platform

Project Overview: Amnesia is a web-based platform for anonymizing data, including relational, multi-dimensional, and hierarchical data. Currently, the platform supports a variety of anonymization algorithms such as Flush, parallel Flush, k-anonymity, km-anonymity, and Incognito. Amnesia also supports the definition of custom anonymization rules and hierarchies.

Responsibilities: I am the main developer of this project.

Project website: <https://amnesia.imis.athena-innovation.gr/>

Programming languages: **JavaScript, Java**

Other technologies/tools: **Spring**

December 2012 - July 2015

MoDisSENSE: A Distributed Spatio-Temporal and Textual Processing Platform for Social Networking Services.

Project Overview: MoDisSENSE is an open-source distributed platform that provides personalized search for points of interest (POIs) and trending events based on the user's social graph, i.e., by combining spatio-textual user-generated data (e.g. GPS traces, check-ins, user profiles, graph of friendship relations, user posts in social networks, etc.).

Responsibilities: I implemented a distributed version of the DBSCAN algorithm for POI discovery, and a distributed algorithm that collects GPS traces and reconstructs the trajectories of the end-users. Both algorithms were implemented using Hadoop, Hbase and postGIS. I also developed all web services that are relevant to POI discovery and suggestion.

Project website: <http://www.modissense.gr/>

Programming languages: **Java**

Other technologies/tools: **Hadoop, Hbase, PostGIS**

Teaching Experience

Fall Semesters 2013/2014/2015

Teaching Assistant - B.Sc. course "Operating Systems"

Prof. Stathes Hadjiefthymiades

Department of Informatics and Telecommunications,
National Kapodistrian University of Athens, Greece

I was responsible for the programming exercises during the semester and the examination period.

B.Sc. and M.Sc. Semester Projects

- **Database System Topics**

M.Sc. Fall Semester 2014

Implementation of a query materializer and optimizer for relational algebraic expressions

The aim of this project was to parse the input queries and find the optimal plan of execution, based on the available database and system information.

Programming Language : **Java**.

- **Internet Technologies and Applications:**

B.Sc. Spring Semester 2011

Design and implementation of a social network

Technologies: Client/Server architecture, Application Servers, Message Passing, Message Queues, JSP, JDBC.

- **Systems Programming**

B.Sc. Spring Semester 2011

Implementation of a Parallel Word Count Program

The aim of this project was to implement a MapReduce-like word count program that takes as input a collection of documents and outputs the number of times each word appears in the collection.

Programming languages: **C**

- **Software Development**

B.Sc. Fall Semester 2010

Project: Implementation of game "Tic Tac Toe" for mobile devices

Technologies: **Web Services (XML/SOAP/WSDL), JDBC**

Programming Language: **Java**.

Technical Skills

- Programming Languages : C, C++, Java, Python
- Web Development : HTML, CSS, PHP, Javascript, JSP, JSF
- Operating Systems : Linux Ubuntu, Kubuntu, Microsoft Windows
- Graphics : Java Swing
- Databases : MySQL, PostgreSQL, PostGIS, Oracle(limited working experience)
- NoSQL Systems: Hadoop, Hbase
- Shell Programming : shell(bourne/bash/tcsh-Unix,awk)
- Frameworks: Spring

Publications

- Mytilinis, I. Giannakopoulos, I. Konstantinou, K. Doka, D. Tsitsigkos, M. Terrovitis, L. Giampouras and N. Koziris: **MoDisSENSE: A Distributed Spatio-Temporal and Textual Processing Platform for Social Networking Services**. In Proceedings of the 2015 **ACM SIGMOD/PODS** International Conference on Management of Data (SIGMOD'15), Demo track, Melbourne, Victoria, Australia, 2015.

Attended Seminars

30-31/06/2015: Hellenic Data Management Symposium (HDMS), Athens, Greece

24-25/06/2014: Hellenic Data Management Symposium (HDMS), Athens, Greece

19-20/03/2014: European Data Forum (EDF), Athens, Greece

Spoken Languages

- Greek (mother tongue)
- English