



Anastasia Terzi

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ABOUT ME

PhD Student and Research Associate at University of Western Macedonia

WORK EXPERIENCE

21/09/2021 – CURRENT Kozani, Greece

UNIVERSITY RESEARCH ASSOCIATE UNIVERSITY OF WESTERN MACEDONIA

My tasks include designing experiments, collecting and analyzing data, preparing research reports and publications, managing laboratory equipment and supplies, and coordinating with other research staff or faculty members.

Business or Sector Information and communication

01/09/2020 – CURRENT Thessaloniki, Greece

LIVE VIDEO OPERATOR SELF EMPLOYED

-Video Streaming

25/05/2022 – 30/09/2022 Kozani, Greece

LECTURER'S ASSISTANT UNIVERSITY OF WESTERN MACEDONIA

As an Assistant in Java course I had to prepare the exercises and the projects for the students. Part of my job was to meet with students to answer their questions about the projects and give them instructions towards the solution. During the exam period I was tutoring the students that have failed in the past or needed help to study for the course.

08/09/2022 – 18/09/2022 Thessaloniki, Greece

PROMOTIONS ASSISTANT HAPPY PEOPLE MODELS

During the 86th Thessaloniki International Fair I was part of the team representing the United Arab Emirates. My role was to inform guests about the opportunities and the projects of the Ministry of Industry and Advanced Technology of the UAE. As part of my job I had to organise appointments between the business representatives from Europe and the Ministry's representatives in order to come to agreement and start some sort of collaboration.

01/09/2019 – 01/09/2021 Kozani, Greece

WEB ENGINEER UNIVERSITY OF WESTERN MACEDONIA

Coordinator & Full stack developer

Successfully led team of five fellow students.

Achievements:

- Redesigned UI
- Updating and Optimizations of SQL Database
- Creation of new administration system for updating content and changing webpage's appearance without interfering with code
- Designing logo for the department

Link to webpage: <https://ece.uowm.gr/>

01/11/2018 – 01/06/2019 Kozani, Greece

UNIVERSITY RESEARCH SUPPORT WORKER UNIVERSITY OF WESTERN MACEDONIA

My part on this research program was to compare GIS apps (both open source and proprietary) in order to choose the one that mostly covered the needs of the project and present an orthomosaic with ground analytics using test data from drones.

Link to research project webpage: <http://dias-project.gr/>

01/07/2020 – 30/09/2020 Halkidiki, Greece

WAITRESS AKRI

01/11/2018 – 01/02/2019 Kozani, Greece

WAITRESS TO KOTETSI

01/02/2018 – 01/06/2018 Kozani, Greece

LABORATORY ASSISTANT UNIVERSITY OF WESTERN MACEDONIA

Part of assistant team | | Studentship

Our role was to re-create lab exercises and present them to minors by using the laboratory equipment. We successfully executed 4 exercises using Lab-Volt base units, Generators and Oscillometers following our professor's guidelines.

01/07/2018 – 30/09/2018 Halkidiki, Greece

WAITRESS AKRI

● **EDUCATION AND TRAINING**

01/12/2021 – CURRENT

PHD IN ELECTRICAL AND COMPUTER ENGINEERING University of Western Macedonia

Software is an integral part of man's daily life, as it supports a wide range of his activities. Software undergoes frequent maintenance procedures so that it can keep up with the ever-increasing needs of the environment in which it operates. This makes it imperative to continuously evaluate the quality of the software throughout its life cycle. The evaluation of software quality includes several stages which are related to a) the collection of data from software development, b) the analysis of the data to draw useful conclusions and c) the visualization of this data. The aim of the thesis is to explore methods and techniques that will support the last 2 stages

Field of study Information and Communication Technologies |

Thesis Analysis and visualization methods for software development data.

01/09/2016 – 21/07/2021 Kozani, Greece

INTEGRATED MASTER IN ELECTRICAL AND COMPUTER ENGINEERING University of Western Macedonia

Computer Science: knowledge in modern areas of Computer Science such as Parallel Computing, Distributed Computing, Mobile and Wireless Computing, Design, Analysis and Development of Algorithms. Software and Systems Technologies: knowledge for the Development and Design of Software Systems, Databases, Mobile and Embedded Systems as well as applications within the Internet of Things. Information, Telecommunications and Networks: knowledge in the field of Communications for the design and implementation of Computer Networks, Optical and Wireless Telecommunications Networks, as well as for the analysis and processing of Digital Signals and Images as well as Biomedical Signals. Electronics and Electrical Engineering: knowledge in the field of Electronics and Electrical Engineering for the study, design and development of electrical-electrical systems.

Energy: knowledge in the field of Energy regarding the design, development and production of electricity systems, electromechanical energy conversion systems, electrical installations, measurements and automation.

Address Karamanli & Ligeris, 50131, Kozani, Greece | **Website** <https://ece.uowm.gr/> |

Field of study Electrical and Computer Engineering | **Final grade** 7.99/10 | **Level in EQF** EQF level 7 |

National classification Integrated Master | **Type of credits** ECTS | **Number of credits** 300 |

Thesis Reuse Opportunities in JavaScript applications

Link https://github.com/Anasterzia/Anasterzia_diploma

● PUBLICATIONS

2024

Using code from ChatGPT: Finding patterns in the developers' interaction with ChatGPT

ChatGPT can advise developers and provide code on how to fix bugs, add new features, refactor, reuse, and secure their code but currently, there is little knowledge about whether the developers trust ChatGPT's responses and actually use the provided code. In this context, this study aims to identify patterns that describe the interaction of developers with ChatGPT with respect to the characteristics of the prompts and the actual use of the provided code by the developer. We performed a case study on 267,098 lines of code provided by ChatGPT related to commits, pull requests, files of code, and discussions between ChatGPT and developers. Our findings show that developers are more likely to integrate the given code snapshot in their code base when they have provided information to ChatGPT through several rounds of brief prompts that include problem-related specific words instead of using large textual or code prompts. Results also highlight the ability of ChatGPT to handle efficiently different types of problems across different programming languages.

ICSR 2024(to appear)

2024

Managing security vulnerabilities introduced by dependencies in React.JS JavaScript framework

Currently, the reuse of third-party packages is common practice when it comes to JavaScript (JS) application development. While software reuse brings numerous benefits contributing to accelerated development cycles, it also brings challenges associated with the security vulnerabilities introduced by third-party dependencies. These vulnerabilities have been studied mostly in the context of the hosting software ecosystem (i.e. npm package) while their impact on client applications is understudied. We believe that this impact should be carefully assessed by developers to be able to effectively manage the third-party dependency update process. Our primary objective in this study is to (a) investigate the most frequently appearing vulnerabilities introduced by third-party dependencies and their impact on the client application through a set of metrics, (b) examine the availability of patches/fixes released by the third-party packages to resolve the observed vulnerabilities and (c) examine whether the actual updates of third-party dependencies, performed in the client applications, are associated with the impact of the dependencies and the availability of updates. To achieve this, we conducted a case study on 5572 vulnerability reports obtained from React. js. Our results show that the update propagation of third-party dependencies in client applications is significantly associated both with the impact of the vulnerabilities introduced (i.e. severity, distribution, and volume) and with the availability of the fixes/ patches. To assist the decision-making process of third-party dependencies updates we propose a model that will help practitioners consider all related evidence.

SANER 2024(to appear)

2023

Enhancing User Experience: Virtual Assistants in Greek University Helpdesk Service

It is commonly accepted that we live in a digital era of constant changes. Digital revolution has brought significant changes in the way we live, work, and interact with each other, with messaging apps turning to the centerpiece of our communication. Individuals and especially youngsters are constantly connected through devices for both social and entertainment reasons. This growing enthusiasm for messaging apps brought the use of bots as supplementary virtual assistants into the spotlight. Examples of companies employing bots into their business chats examples marked that chatbots contribute to a better user experience while at the same time reduce personnel workload. The results raised the question whether the

introduction of virtual assistants will benefit the everyday life of Greek Universities. To examine our hypothesis in the realms of University of Western Macedonia, we introduced the "bot-UoWM", a zero- code conversational chatbot that supports Greek Natural Language, in well-known social media platforms. To evaluate the system, we conducted an empirical study using a questionnaire on 80 participants. The obtained survey data were analyzed using a combination of quantitative and qualitative techniques. The evaluation results show that our system improves user acceptance and understanding of the results. They also indicate that bots could help different users with their seeking tasks. Our results and discussions highlight the impact of using visual and interactive features as assistants for higher education.

PCI2023

Link <https://dl.acm.org/doi/abs/10.1145/3635059.3635089>

2022

Software Reuse and Evolution in JavaScript Applications

JavaScript (JS) is one of the most popular programming languages on GitHub. Most JavaScript applications are reusing third-party components to acquire various functionalities. Despite the benefits offered by software reuse there are still challenges, during the evolution of JavaScript applications, related to the management and maintenance of the third-party dependencies. Our key objective is to explore the evolution of library dependencies constraints in the context of JavaScript applications in terms of (a) the changeability (i.e., number of removed, added, or maintained libraries) (b) the update frequency of the library dependencies. For this purpose, we conducted a case study on the 86 most forked JavaScript applications hosted on GitHub and analyzed reuse data from a total of 2.363 successive releases. In general, 39% of the packages introduced in the first version of the project are being reused in the entire project's lifetime. The number of package dependencies slightly grows over time, while several other are being permanently removed. Regarding the evolution of third-party applications, it is observed that developers do not update the dependencies constraints to a most recent version, waiting to reach probably "breaking points" when the updates will be inevitable.

Link <https://ieeexplore.ieee.org/abstract/document/10011204>

2021

Reuse Opportunities in JavaScript applications

JavaScript nowadays is among the most popular programming languages, used for developing web and IoT applications. Currently, the majority of JavaScript applications is reusing third-party components to acquire various functionalities. In this paper we isolate popular reused components and explore the type of functionality that is mostly being reused. Additionally, we examine whether the client applications adapt to the most recent versions of the reused components, and further study the reuse intensity of pairs of components that coexist in client applications. For this purpose, we performed a case study on 9389 components reused by 430 JavaScript applications hosted in GitHub. The results show that Compiler and Testing Frameworks are the most common types of functionality being reused, while the majority of client applications tend to adopt the recent versions of the reused components.

Link <https://ieeexplore.ieee.org/abstract/document/9582564>

2018

Towards a Fully Open-Source System for Monitoring of Crops with UAVs in Precision Agriculture

UAVs offer an easy, fast and cost-effective way to acquire data for crop monitoring, alleviating most of the limitations of previously adopted methods. UAVs are frequently used the last years in Precision Agriculture applications as they are considered to be the future of remote sensing, and therefore it is a field that draws a lot of attention. Several software solutions have been developed for processing the images acquired from the UAVs to monitor the crops. However, most of these solutions are offered as commercial products, a fact that increases the already high cost of UAV-based Remote Sensing in Precision Agriculture. In this paper, we propose a fully open source software system that can be used to support the standard workflow required to process the data acquired from the UAVs.

Link <https://dl.acm.org/doi/abs/10.1145/3437120.3437333>

● **LANGUAGE SKILLS**

Mother tongue(s): **GREEK**

Other language(s):

	UNDERSTANDING		SPEAKING		WRITING
	Listening	Reading	Spoken production	Spoken interaction	
ENGLISH	C2	C2	C2	C2	C2
GERMAN	A2	A2	A2	A2	A2

Levels: A1 and A2: Basic user; B1 and B2: Independent user; C1 and C2: Proficient user

● **DIGITAL SKILLS**

Social Media

Facebook/Instagram Creator Studio | Social Media | TikTok | Instagram | Facebook | Skype | Youtube | Zoom | WhatsApp

Microsoft Suite

Microsoft Office | Microsoft Word | Microsoft Excel | Microsoft Powerpoint | Microsoft Teams

Google Suite

Google Blogger | Google Analytics, Google Ads, Google Search Console, Google Keyword Planner, Google Market Finder | Google Marketing tools | Google - Google Business, Google ADS & Google Analytics | Google ADS Certification - Google Digital Academy | Google (Google Meet, Google Drive, Google Doc, Google Sheets)

iWork Suite

Numbers | Keynote | Pages

Programming

HTML | JavaScript | VHDL(Beginner) | CSS | C, C++,C# | Java | Assembly 8086 | SQL | PHP | LINUX/UNIX

● **DRIVING LICENCE**

Driving Licence: B1