



Yannis Nikoloudakis

Senior backend Engineer

Contact



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Profile

Experienced Full Stack Developer with a strong background in network engineering and research. Proven expertise in developing and maintaining complex systems, with a focus on microservices, cybersecurity, IoT, and cloud computing. Skilled in Python, Go, JavaScript, Docker, Kubernetes, and various other technologies. Adept at leading engineering teams and managing projects from conception to deployment. Published author and peer reviewer in reputable journals. Seeking to leverage extensive technical and leadership skills in a challenging software development role.

Skills

Python | FastAPI | REST APIs | Microservices | Distributed Systems | Software Architecture | Unit Testing | Software Design | API Development | Code Review | PostgreSQL | Redis | MongoDB | NoSQL | SQL | RabbitMQ | Docker | Kubernetes | Google Cloud | Serverless | Jenkins | Git | GitHub | GitLab | JavaScript | Golang | Java | NodeJS | Angular | React | C | MySQL | InfluxDB | Mongoose | Cyber Security | Software Defined Networks | Raspberry Pi | Arduino | IoT | English | Clean Coding | Team Collaboration

Education

- **Bachelor's Degree in Informatics Engineering**
Technological Educational Institute of Crete (TEIC)
Field of study: Information and Communication Technologies
Final Grade: 6.68
Thesis: A smart watering system with remote control features
Supervisor: Dr Spyridon Panagiotakis
- **M.Sc in Informatics and Multimedia**
Technological Educational Institute of Crete (TEIC)
Field of study: Applied Informatics and Multimedia
Final Grade: 8.97/10
Thesis: A cloud-Based Emergency System for Smart Enhanced Living Environments
Supervisor: Dr Evangelos Pallis
- **PhD Candidate in Computer Science**
University of the Aegean
Dissertation Title: Dynamic Network Resource Management & Service Adaptation in Fog-Based environments for Real Time Media Delivery with Maximum Possible Quality of Experience
Supervisor: Dr Charalambos Skianis

Experience

- **Full Stack Software Engineer** 2022 - Present
Project Agora - Think Digital Group
As a Full Stack Software Engineer and Tech Lead, I played a key role in the development and leadership of the company's in-house Digital Marketing and Ad-Tech solutions. I contributed to designing, building, and optimizing scalable web applications and APIs, focusing on delivering high-quality user experiences and robust back-end performance. As a Tech Lead, I guided a team of engineers, ensuring adherence to best practices, overseeing code quality, and driving technical decision-making. Collaborated closely with cross-functional teams, including product managers and data analysts, to deliver impactful features and ensure seamless third-party integrations. Led system architecture discussions and implemented innovative solutions to enhance product reliability and scalability.
- **Peer Reviewer** 2019 - Present
Springer Publications - Reliable Intelligent Environments Journal
- **Peer Reviewer** 2019 - Present
Springer Springer Publications - Wireless Networks Journal

Technological Educational Institute of Crete (TEIC)

Hellenic Mediterranean University (HMU)

- Full Stack Engineer, team leader and project manager for EU-Funded projects, mainly targeting cyber-security and cloud/edge/fog computing, IoT, etc.
- Management of bachelor and M.Sc students (Thesis, publications and Dev tasks)
- Scientific strategy assistant
- Proposal/Publications writing

SMILE: Smart mobilLity at the European land borders

H2020-SEC-2016-2017-1, 740931

Development of low-cost technological solutions to enhance land border management by integrating smart mobile devices for secure biometric authentication, streamlining border control processes, and improving traveler convenience without compromising security.

FORTIKA – Cyber Security Accelerator for trusted SMEs IT Ecosystems

H2020-EU.3.7.4, 74069

Development of a hardware-accelerated gateway and AI-powered cybersecurity services to protect SMEs against cyber threats. It provided a marketplace for tailored security solutions, enabling SMEs to enhance their cybersecurity posture efficiently and cost-effectively.

SPHINX: A Universal Cyber Security Toolkit for Health-Care Industry

H2020-EU.3.1.5.1, 826183

Development of a universal cybersecurity toolkit tailored for healthcare IT ecosystems, enhancing cyber protection and ensuring patient data privacy and integrity. It provided automated device and service verification, adaptable to existing infrastructures, and offered customizable security services through an intuitive interface.

SHAPES – Smart and Healthy Aging through People Engaging in Supportive Systems

H2020-EU.3.1.4.1, 857159

Development of an open platform integrating digital solutions to support healthy and active ageing. It facilitated independent living for older adults by connecting home and community environments with health and care networks, aiming to reduce healthcare costs and improve quality of life.

5D-Aerosafe – 5 services of Drones for increased airports and waterways safety and security

H2020-EU.3.4, 861635

Development of drone-based services to enhance airport and waterway safety by integrating unmanned aerial systems for tasks such as CNS equipment calibration, perimeter security checks, and runway inspections, ensuring efficient operations within restricted areas

Backend/Frontend Developer

2014- 2015

Technological Educational Institute of Crete (TEIC)

- Backend and Frontend developer for EU-funded and Nation-funded projects

Holistic:

Development of a holistic water management for residential areas

Cloud-Managed Compost Management:

Pilot development, operation, and evaluation of a combined management system of organic residues for the municipality of Ilioupolis

nExt generation eMergencY commuNicatiOnS - EMYNOS

H2020-DRS-19-2014, 653762

Development of a next-generation emergency communication platform integrating voice, video, and data for accessible, secure, and efficient communication. It focused on supporting diverse users, including those with disabilities, leveraging IP-based technologies, and ensuring interoperability with existing emergency systems across Europe.

Teaching Associate

Technological Educational Institute of Crete (TEIC)

2014 - 2015

- Teaching associate for the “Computer Networks” course.

Networks Engineer

2009 - 2014

ANYSMA

Design, deployment and maintenance of wired, wireless (LAN, PAN, WAN, MAN, etc.) and fiber-optic networks

- Deployment and maintenance supervisor
- Fiber Optics Expert/Splicer
- Research Associate
- Junior Developer

Networks Engineer

2007 - 2008

Qualis Informatics

Design, deployment and maintenance of wired and wireless networks (LAN, PAN, WAN, MAN, etc.)

- Deployment and maintenance supervisor
- Research Associate

Language Skills

	Understanding		Speaking		Writing
	<i>Listening</i>	<i>Reading</i>	<i>Spoken Production</i>	<i>Spoken Interaction</i>	
English	C2	C2	C2	C2	C2

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

Publications

2016

Cloud Composting: A Centralized Approach

Y. Nikoloudakis, S. Panagiotakis, E. Markakis, G. Atsali, T. Manios.

Presented at 2016 International Conference on Telecommunications and Multimedia (TEMU), Heraklion, Greece.

DOI: 10.1109/TEMU.2016.7551941

A Fog-Based Emergency System for Smart Enhanced Living Environments

Y. Nikoloudakis et al. Published in IEEE Cloud Computing, Vol. 3, No. 6, pp. 54–62, Nov.-Dec.

DOI: 10.1109/MCC.2016.118

2017

Towards a FOG-Enabled Navigation System with Advanced Cross-Layer Management Features and IoT Equipment

Y. Nikoloudakis, S. Panagiotakis, E. Markakis, G. Mastorakis, C. X. Mavromoustakis, E. Pallis.

Published in Cloud and Fog Computing in 5G Mobile Networks: Emerging Advances and Applications.

DOI: 10.1049/PBTE070E_ch6.

An NFV-Powered Emergency System for Smart Enhanced Living Environments

Y. Nikoloudakis, E. Markakis, G. Mastorakis, E. Pallis, C. Skianis.

Presented at the 2017 IEEE NFV-SDN Conference, Berlin, Germany.

DOI: 10.1109/NFV-SDN.2017.8169872

2018

Edge Caching Architecture for Media Delivery over P2P Networks

Y. Nikoloudakis et al.

Presented at the 2018 IEEE 23rd International Workshop on Computer Aided Modeling and Design of Communication Links and Networks (CAMAD), Barcelona, Spain.

DOI: 10.1109/CAMAD.2018.8514935

Composting as a Service: A Real-World IoT Implementation
Yannis Nikoloudakis, S. Panagiotakis, T. Manios, E. Markakis, E. Pallis.
Published in *Future Internet*, Vol. 10, No. 11, Article 107.
DOI: [10.3390/fi10110107](https://doi.org/10.3390/fi10110107)

2019

MULTI-SENSORY HUMAN BOND COMMUNICATION
Published in *IEEE Communications Magazine*, Vol. 57, No. 2, pp. 1-2.
DOI: [10.1109/MCOM.2019.8647097](https://doi.org/10.1109/MCOM.2019.8647097)

Acceleration at the Edge for Supporting SMEs Security: The FORTIKA Paradigm
E. Markakis et al.
Published in *IEEE Communications Magazine*, Vol. 57, No. 2, pp. 41-47.
DOI: [10.1109/MCOM.2019.1800506](https://doi.org/10.1109/MCOM.2019.1800506)

Security Assessment as a Service Cross-Layered System for the Adoption of Digital, Personalized and Trusted Healthcare
E. Markakis, Y. Nikoloudakis, E. Pallis, M. Manso.
Presented at the 2019 IEEE 5th World Forum on Internet of Things (WF-IoT), Limerick, Ireland.
DOI: [10.1109/WF-IoT.2019.8767249](https://doi.org/10.1109/WF-IoT.2019.8767249)

A View on Edge Caching Applications
D. Antonogiorgakis et al.
Available on arXiv.
DOI: [10.48550/arXiv.1907.12359](https://doi.org/10.48550/arXiv.1907.12359)

Cloud-Native Application Validation & Stress Testing Through a Framework for Auto-Cluster Deployment
N. Astyrakakis, Y. Nikoloudakis, I. Kefaloukos, C. Skianis, E. Pallis, E. K. Markakis.
Presented at the 2019 IEEE 24th International Workshop on CAMAD, Limassol, Cyprus.
DOI: [10.1109/CAMAD.2019.8858164](https://doi.org/10.1109/CAMAD.2019.8858164)

Vulnerability Assessment as a Service for Fog-Centric ICT Ecosystems: A Healthcare Use Case
Y. Nikoloudakis, E. Pallis, G. Mastorakis, et al.
Published in *Peer-to-Peer Networking and Applications*, Vol. 12, pp. 1216-1224.
DOI: [10.1007/s12083-019-0716-y](https://doi.org/10.1007/s12083-019-0716-y)

2020

A Survey on the Internet of Things (IoT) Forensics: Challenges, Approaches, and Open Issues
M. Stoyanova, Y. Nikoloudakis, S. Panagiotakis, E. Pallis, E. K. Markakis.
Published in *IEEE Communications Surveys & Tutorials*, Vol. 22, No. 2, pp. 1191-1221.
DOI: [10.1109/COMST.2019.2962586](https://doi.org/10.1109/COMST.2019.2962586)

A Hardware Acceleration Platform for AI-Based Inference at the Edge
K. Karras, E. Pallis, G. Mastorakis, et al.
Published in *Circuits, Systems, and Signal Processing*, Vol. 39, pp. 1059-1070.
DOI: [10.1007/s00034-019-01226-7](https://doi.org/10.1007/s00034-019-01226-7)

2021

An Intuitive Distributed Cyber Situational Awareness Framework Within a Healthcare Environment
G. Doukas, M. Kontoulis, S. Pelekis, C. Ntanos, D. Askounis, Y. Nikoloudakis, et al.
Published in *Cyber-Physical Threat Intelligence for Critical Infrastructures Security*.
DOI: [10.1561/9781680838237.ch20](https://doi.org/10.1561/9781680838237.ch20)

Public Safety Technology Gaps and Opportunities
Published in *IEEE Future Directions Committee Public Safety Technology Task Force*.

A Survey on Human and Personality Vulnerability Assessment in Cyber-Security: Challenges, Approaches, and Open Issues
Available on arXiv.
DOI: [10.48550/arXiv.2106.09986](https://doi.org/10.48550/arXiv.2106.09986)

Towards a Machine Learning-Based Situational Awareness Framework for Cybersecurity: An SDN Implementation

Y. Nikoloudakis, I. Kefaloukos, S. Klados, S. Panagiotakis, E. Pallis, C. Skianis, E. K. Markakis. Published in *Sensors*, Vol. 21, Article 4939.

DOI: 10.3390/s21144939

Unification of Edge Energy Grids for Empowering Small Energy Producers

E. K. Markakis, Y. Nikoloudakis, K. Lapidaki, K. Fiorentzis, E. Karapidakis.

Published in *Sustainability*, Vol. 13, Article 8487.

DOI: 10.3390/su13158487

2022

A Cybersecurity Culture Survey Targeting Healthcare Critical Infrastructures

F. Gioulekas, E. Stamatiadis, A. Tzikas, K. Gounaris, A. Georgiadou, A. Michalitsi-Psarrou, G. Doukas, M. Kontoulis, Y. Nikoloudakis, S. Marin, et al. Published in *Healthcare*, 2022, Vol. 10, Article 327.

DOI: 10.3390/healthcare10020327

The FORTIKA Accelerated Edge Solution for Automating SMEs Security

E. K. Markakis, Y. Nikoloudakis, E. Pallis, A. Černivec, P. Fouliras, I. Mavridis, G. Sakellariou, S. Salonikias, N. Tsinganos, A. Sideris, et al. Published in *Challenges in Cybersecurity and Privacy - The European Research Landscape*, 1st Edition, River Publishers.

eBook ISBN: 9781003337492

The Impact of COVID-19 on Travel Behaviour and Holiday Intentions: Evidence from Greece

N. Trihas, K. Vassakis, I. Kopanakis, Y. Nikoloudakis, I. Kefaloukos, E. Pallis, E. K. Markakis. Published in *Transforming Leisure in the Pandemic*, 1st Edition, Routledge, 2022.