

Katerina Antoniou

EMBEDDED SOFTWARE ENGINEER

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Personal Profile

I recently graduated with a Bachelor of Science in Computer Science and Biomedical Informatics from the University of Thessaly. My thesis topic was "Digital System for Epileptic Seizure Detection based on TinyML", which developed lightweight machine learning algorithms that detect epileptic scalp EEG patterns and can be deployed to a microcontroller. Passionate about research and development in the fields of Biomedicine, Environment, and Space.

Interests: Embedded Systems, IoT, Android Application Development

Education

University of Thessaly

Lamia, Greece

Bachelor's Degree (Computer Science and Biomedical Informatics)

Oct 2018 - Nov 2023

- **Thesis Topic:** Digital System for Epileptic Seizure Detection based on TinyML
- **Conference Presentations:** Workshop: Introduction to AutoDesk Tinkercad (FOSSCOMM 2022)
- **Clubs and Societies:** IEEE University of Thessaly (Lamia) Student Branch, IEEE EMB Student Chapter University of Thessaly, Lamia, IEEE Women in Engineering Student Branch Affinity Group University of Thessaly - Lamia
- **Courses:** Computer Architecture, Embedded Systems for Biomedicine, Microprocessors, Pattern Recognition, Medical Equipment Technology, Sensor Networks and IoT, Automatic Control Systems, Cryptography, Robotic Systems

Work Experience

TRAQBEAT

Online

Internship

Jul 2022 - Aug 2022

- Worked on firmware development using an EFR32BG Bluetooth board and Simplicity Studio
- The main objective was to receive and store data from the accelerometer in real time
- **Technical Skills:** Embedded Software Development, C, Simplicity Studio
- **Soft Skills:** Time Management, Communication

Projects

P.A.M.O.C

Lamia, Greece

University of Thessaly

Apr 2021 - Jun 2021

- Group project for the course Embedded Computer Systems for Biomedicine
- Development of a portable panic attack detection system based on Arduino
- **Technical Skills:** Arduino, C, Circuits, Tinkercad
- **Soft Skills:** Teamwork, Presentation Skills, Report Writing

Knee Movement Simulator

Lamia, Greece

University of Thessaly

May 2022 - Jun 2022

- Group project for the course Integrated Systems
- Development of a small knee movement simulator using an Arduino and Servomotors
- **Technical Skills:** Arduino, C, Circuits
- **Soft Skills:** Teamwork, Report Writing, Problem Solving

Indoors Localization

Lamia, Greece

University of Thessaly

Dec 2021 - Jan 2022

- Group project for the course Sensor Networks and IoT
- Locating a Raspberry Pi 3 Model B using three BLE beacons
- **Technical Skills:** Raspberry Pi, Python
- **Soft Skills:** Teamwork, Presentation Skills, Report Writing, Problem Solving

Gaia

Athens, Greece

EESTech Challenge 2023

Jul 2023 - Present

- Group project for the Final Round of the Hackathon EESTech Challenge 2023 with the topic Mobile App Development: Gamification
- Development of an app that focuses on rewarding restaurants that adopt behaviors to reduce their food waste. The ancient Greek theme of the app gives the users the chance to create their path to Olympus, as their restaurant reduces its environmental footprint
- **Awards:** 3rd Place
- **Technical Skills:** Android Studio, Java, XML
- **Soft Skills:** Teamwork, Presentation Skills, Design Thinking, Problem Solving, Time Management

Volunteer Experience

IEEE SB UTH Lamia

Vice Chair

Lamia, Greece

Jan 2021 - Jan 2022

- Organizing and attending lectures and workshops
- Communication with Lectures and Students, Schedule Creation, Email Writing, Social Media and YouTube Channel Management, Promotion, Fundraising

6th IEEE HSYP Congress

Secretary

Online

Aug 2021 - Dec 2021

- An online two-day Congress on Engineering and IEEE Students and Young Professional Activities
- Social Media Management, Communication with Lectures and Attendees, Fundraising

FOSSCOMM 2022

Organization Volunteer

Lamia, Greece

Aug 2022 - Nov 2022

- Annual Free and Open Source Software Communities Meeting
- Schedule Creation, Fundraising, Volunteers Management

SIOT4ES IEEE Entrepreneurship Week 2022

Organization Volunteer

Online

Oct 2022 - Dec 2022

- A two-day conference held for the Entrepreneurship Week of IEEE Region 8, focusing on the trends in energy, telecommunications, and IoT
- Communication with Lecturers, Fundraising

Achievements

Contests

Won 3rd Place in EESTech Challenge Final Round (2023), Won 1st Place in EESTech Challenge Athens Round (2023), Participated in NASA Space Apps Challenge (2023), Participation in EIT Health i-Days (2021), Participated in IEEEExtreme 15.0 (2021)

Presentations

Presented the workshop "Introduction to AutoDesk Tinkercad" at FOSSCOMM (2022)

Travel

Traveled to 6 European Cities using the Interrail Pass (2019), Traveled to Tenerife in Spain with the program Erasmus+ Eurobalades (2015)

Skills

Programming

C (Embedded Software), Python (Pandas, TensorFlow/Keras, NumPy, Scikit-learn, etc.), MATLAB, Java (Android Applications)

Miscellaneous

Linux, Shell (Bash), \LaTeX (Overleaf), Microsoft Office, Firebase, Circuit Design

Soft Skills

Time Management, Teamwork, Problem Solving, Documentation, Presentation, Research, Adaptability, Active Learning

Languages

Greek (Native) English (B2, University Courses)

Technical Strength

C



Python



Android App Development



MATLAB



Circuit Design

