

Panagiotis (Panos) Kalogeropoulos

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Education

Accelerated Bachelor - ICT & Software Engineering *Fontys University of Applied Sciences*
BSc with Integrated Pre-master *September 2022 - August 2025*

Member of the [Delta](#) Excellence Honors Program, the Honors association of Fontys ICT, consisting of Ambitious students that are given the academic freedom to participate in innovative projects along with real-world organizations.

The Accelerated Bachelors program provides automatic admission to the Technische Universiteit Eindhoven's Computer Science and Engineering masters degree program.

Work experience - Honors Projects

OpenRemote - Paid position *September 2023 - Present*
Software Engineer, Product Owner for Fleet Telematics *Strijp-S, Eindhoven, The Netherlands*

- OpenRemote is the only industry-grade, open-source IoT management system, used by the Dutch government, municipalities within Europe, and conglomerates like Philips and VDL.
- Ideated and created the [fleet telematics integration of OpenRemote](#).
- Implemented full support for all [Teltonika Telematics](#) devices, a leading telematics and GPS tracker manufacturer, including bi-directional communication with the vehicle.
- Connect and talk to (potential) clients, and help them understand the project, to seamlessly integrate it into their organization.
- Created an [open-source, generic TCP server](#) that converts Teltonika Telematics payloads to MQTT messages, thus modernizing all Teltonika Telematics devices to MQTT.
- Created a parser that crawls the Teltonika Telematics wiki to parse the parameter IDs sent by Teltonika devices, allowing for industry-first, automatic, 100% vehicle parameter parsing for all Teltonika Telematics devices.
- Implemented full [X.509 mTLS authentication](#) for all MQTT clients, allowing users to connect to AWS IoT Core.
- Implemented [dynamic timestamp placeholders](#) that can output the timestamp requested by the user in an MQTT Agent.
- Adapted OpenRemote to allow [deployment to Balena](#), an IoT fleet management platform, allowing deployment of OpenRemote as IoT edge devices managed remotely.
- Reconfigured and repackaged [Eclipse Hawkbit](#) to allow remote firmware deployment to thousands of preinstalled ESP32 devices, serving as controllers for photovoltaic panels.

RootBox - Honors Project *February 2024 - Present*
Team Lead, Scrum master, CTO *Strijp-S, Eindhoven, The Netherlands*

- RootBox is a new CTF platform that attempts to revolutionize CTFs, making them more accessible, more enjoyable, and easier to set-up, by allowing an easy yet professional self-hosting deployment using [Docker](#).
- Managed the software development team and worked with stakeholders to create functional and non-functional requirements, and divided tasks to team members according to their strengths and weaknesses.
- Created and implemented the architecture of the platform, orchestrating 9 docker images, while still allowing a full open-source release.

- Created a custom backend solution in [ASP.NET Core](#) that uses [Keycloak](#) for user authentication, [Entity Framework Core](#) for data persistence, [OpenAPI](#) for automatic frontend API client generation, and [Sonatype Nexus](#) for management of Docker images, which are used to deploy the CTF challenges.
- Developed a container management system, that dynamically deploys and deletes containers, according to requests made by users, to start or stop challenges. Administrators are able to create their own challenges by pushing their images to the Nexus Docker registry.
- The CTF platform is planned to be used in CTFs organized by the University's cybersecurity department as a closed beta, with a public open-source release in 2025.

GLOW Festival 2023 & 2024 - Honors Project

Exhibitor, Fontys ICT Delta

*February 2023 - Present
Eindhoven, The Netherlands*

- Ideated and implemented concepts for two iterations of the GLOW light art festival, taking place in Eindhoven, with a projected visitor count of 1 million.
- In 2023, The Team was allocated [the Groene Toren's 300m² screen](#), one of the biggest screens in the Benelux Region.
- Our team developed an idea that employs a Stable Diffusion AI model that converts a prompt along with the visitor's picture into reality, creating a generative AI image that spans across each day of the festival.
- In 2024, we are focusing into physical user interaction, using audio generation techniques to allow users to manipulate physical objects to generate music, by modulating pitch, waveform, and volume.

Extracurricular activities

Cosmos - International Student Association of (TU) Eindhoven

Committee Chairman

*September 2021 - Present
TU/e Campus, Eindhoven, The Netherlands*

- Committee chairman at [The International Student Association of Eindhoven](#), through which we organize various events to educate, entertain, and create friendships between students that are studying in the city of Eindhoven.
- Organized weekly socialization events for foreign students from Eindhoven, allowing new, current, and past students of the TU/e and Fontys to socialize and find friends in a new country, with an average visitor count of 45 people per event.

Technical skills

Programming Languages

Embedded Systems: Assembly (MIPS), C, Arduino
 Low-level back-end development: Pascal, C++
 App development: Java, C#
 Dynamically-typed Languages: JavaScript, TypeScript, Python, MATLAB

Frameworks / Technologies

Frontend: ReactJS, Lit.dev, NextJS Backend: Springboot, Keycloak, Grafana, Prometheus, EF Core, ASP.NET Core, Prisma ORM, ExpressJS, Balena, OpenAPI, Docker

Computer-Aided Design

SOLIDWORKS, Cura Slicer

Language proficiencies

Greek Native Fluency, Mother-tongue
English Native Fluency