

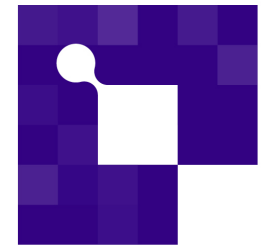
Workshop on Edge AI

Introduction & conclusions

Paolo Azzoni

Inside-IA Secretary General

EF ECS 2022, Amsterdam, 25/11/2022



Inside
Industry Association

Workshop introduction

- Edge AI is expected to be the main driver of future ECS market growth
- Compared to “traditional” AI, it introduces significant challenges due to:
 - resource limitations
 - integration difficulties
 - algorithms optimisation
 - performance
 - limited expertise & lack of skills
 - development time & costs
 - lack of standards
 - Edge AI stack development

Workshop introduction (2)

- Edge AI is challenging but represents a huge opportunity
- EPoSS Task Force “AI at the Edge” and INSIDE organised an EF ECS Session on Edge AI to:
 - kick off the new joint working group on Edge AI,
 - assess the state of the art,
 - illustrate the research & innovation opportunity in the next KDT call,
 - identify future research & innovation directions in the area of intelligent embedded systems, AI hardware accelerators, edge AI-based software and services in the domain of Edge AI.

Workshop program

- **Panorama of current research & innovation on Edge AI**
 - Edge AI state of play
 - Ovidiu Vermesan - SINTEF
- **Description of the Edge AI Focus Topic for the 3rd KDT Call**
 - Pathway to Edge AI Focus Topic
 - Huascar Espinoza - KDT JU
- **Implementing real Edge AI from a SME perspective**
 - Gaining real-world insights from tiny devices
 - Jenny Plunkett - Edge Impulse

Workshop program (2)

- **Large industry & global player vision on Edge AI**
 - Industrial View on the Future of Edge AI
 - Holger Schmidt - Infineon
- **Positioning Edge AI in the continuum and road mapping**
 - Unlock Cloud Edge IoT Continuum
 - Unlock-CEI CSA
 - Inessa Seifert - VDI-VDE

 - Gaining real-world insights from tiny devices
 - OpenContinuum CSA
 - Albert Seubers – Martel Innovate

Conclusions

- **It is crucial to invest on edge AI: it is the right moment!**
 - For economical reasons
 - For the industrial & societal impact
- **Focus will shift more and more towards distribution of AI on the edge (the KDT Focus Topic is already on it)**
 - HW solutions is supporting the development of Edge AI (challenge of memory model)
 - But the large issue is the verification and validation of these solution: the user doesn't generally trust technology
 - Edge AI collective and collaborative intelligence

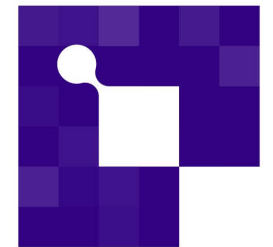
Conclusions (2)

- **Focus Topic:**
 - Start looking at the distributed dimension
 - Tackle heterogeneity and fragmentation (integration)
 - Engineering tools
 - Build trust on Edge AI
- **SME perspective: we have seen an agile, sustainable e2e solution and business model, an educative example of real technology transfer in a very challenging domain. Highlighted the strength of the SME ecosystem (Oura example).**
- **Vision of the large industry is currently oriented to:**
 - Invest on the basement of the stack, the HW platform
 - Identification of a solution for distributed AI
 - Work on trustworthiness (including reliability)
 - Engineering support

Conclusions (3)

- **Edge to cloud continuum**
 - Edge AI has a key position in the continuum
 - Two complementary CSAs
 - OpenContinuum & Unlock CEI
 - Focused on the entire value chain
 - Definition of a roadmap including edge AI
 - JOIN AND CONTRIBUTE TO:
 - FUTURE EVENTS
 - COMMUNITY BUILDING
 - ROADMAP DEFINITION
 - For info visit: <https://eucloudedgeiot.eu/>

Thank you
for watching



Inside
Industry Association