FAQs
Huawei 2024 Nuremberg Tech Arena

What is the Huawei 2024 Nuremberg Tech Arena covering?

Here's your chance to contribute to a greener future and make a significant impact by enhancing a key component of modern energy systems. In this competition, you will move beyond laboratory data, gaining access to real industry data to develop a robust SoC estimation algorithm applicable in the real-world battery energy storage industry. Lithium-ion batteries are the backbone of a secure, robust, and sustainable energy system. Ensuring their stable and efficient operation requires continuous advancements and engineering innovations. One critical aspect for efficient battery operation is the **State of Charge (SoC) estimation**, vital for optimizing battery performance.

Why Participate?

- **Hack for Innovation:** Collaborate with peers to create groundbreaking solutions.
- **Showcase Your Skills:** Present your ideas and prototypes to industry experts and tech leaders.
- **Network and Collaborate:** Connect with brilliant minds and potential collaborators worldwide.
- **Learn and Grow:** Participate in workshops led by top professionals in the tech field.
- **Win Big:** Compete for a chance to win up to 6,000 Euros.

What are the Prizes?
The Competition is endowed with 20,000 Euro divided amongst the following prizes:
Gold prize: the sum of 6,000 Euro (divided equally between each member of the winning team). One winning team in total.
Silver prize: the sum of 4,000 Euro per team (divided equally between each member of the winning team). There will be two winning teams.
Bonze prize: the sum of 2,000 Euro per team (divided equally between each member of the winning team). There will be three winning teams

Who can participate in the challenge?
This event is open to Bachelor, Master's and PhD students currently enrolled in a University in the EU.

When is it?
The registration will stop on November 1st, 2024, until then you can register. The Preliminary Competition is starting on September 30th 2024.

How can I participate in the hackathon?
To participate in the hackathon simply register here https://techarena-nuremberg.hackathon.com/

Where is this going to take place?

It's a hybrid event with first an online competition and then the 10 best teams will be invited to join to a final onsite event in Nuremberg, Germany.

Must I be part of a team? What is the minimum/maximum number of people within a team?
To participate in the Huawei 2024 Nuremberg Tech Arena, you may work alone, or compete on a team of up to 3 members. Collaborating on multiple teams is not permitted and you will be excluded from the Huawei 2024 Nuremberg Tech Arena.

What are the judging criteria?
The evaluation criteria for the State of Charge (SoC) estimation algorithm competition is as follows:
1. **Accuracy:**
   o   Maximum Absolute Error (MaxAE) measures the largest deviation between estimated and actual SoC values,

assessing worst-case scenarios.

2. **Robustness:**
   o   Root Mean Square Error (RMSE) evaluates the algorithm's stability and accuracy across different conditions.
3. **Efficiency:**
   o   Assesses execution time, memory usage, and consistency across a uniform testing environment.
4. **Transient Convergence:**
   o   Measures the algorithm's ability to quickly correct incorrect initial SoC values.
5. **Documentation:**
   o   Evaluates clarity, organization, and code quality.

The total score will be the weighted sum of all evaluation criteria.
The organizers reserve the right to determine the exact weight for each evaluation criteria.
The final rank and score will be determined based on the algorithm performance in the test data sets ONLY.
All jury decisions are final and cannot be challenged.

What resources, supplies, and/or devices will I need to participate?
Participants can use personal devices to access the platform.

How can I find out more?
Registered participants will receive an invitation to an online ideation platform which will open two weeks before the event. Here, they will gain access to exclusive insights provided by Huawei, attend webinars hosted by technical experts of Huawei.

If I have any other questions regarding the hackathon, who can I contact?
Any questions and/or queries regarding the event, please reach out to the following: **amandine@bemyapp.com**