

Formula Bharat 2020

Ather Energy - Software Awards 2020

Software powers **everything** we do at Ather: the scooter, the ecosystem and the enterprise. With 46 sensors on the scooter, *intelligence* is built ground up in the Ather 450, data helps us optimize product performance, improve it via over-the-air updates and also is great insight for designing future products.

The possibilities of how software in an electric vehicle can redefine product development, the ownership experience and change the way we look at the urban commute, is endless.

This puts a huge emphasis on the software code being developed, it cannot be ad hoc. It needs to have sound architecture and high reliability.

While the students at Formula Bharat bring out their engineered marvels onto the track, we would like to understand

- 1) *How are they deciding on their hardware aspects?*
- 2) *How are they arriving at what software they plan to use?*
- 3) *How are they testing this?*
- 4) *Software Integration across their sub-teams*

a) **Software Gurus**

Weightage	Parameters
20%	Product statement Why? Why are we making this product and to what end. Every great product has a great product statement. Why does this product need to be out there - what are we solving for.
30%	Software specification What? What are we trying to build. A clearly laid out specification of the final product helps in keeping the focus and validating our results. It could be something as simple as, cut-off power supply when current consumption goes about 2.5 Amps.
20%	Software solution

	<p>How? How do we create the internals of this software. For e.g. do we use readily available software components or build something totally new and unique.</p>
30%	<p>Testing Validate? How do we validate every line of code and feature that has been developed. Also, ensure that our software doesn't produce results that could result in a critical failure.</p>

b) Code HATChERs

Innovation is at the centre of creating a product that is disruptive. At Ather, we are creating an entire ecosystem. Finding room for ideation in everything we do is integral to our way of working as an organization.

Software can be leveraged for that innovative advantage and to push the envelope on the possibilities we haven't explored yet.

This award focuses on innovation which can be in multiple areas such as:

- Algorithm - Any cool algos that you have used or built.
- Memory Management - The memory footprint of your code.
- Performance - how is your code optimizing performance.
- Communication Protocols - CAN, UART or something you may have created.
- UI & UX - Show us how you can make the cockpit intuitive and interesting for the driver.

The award is NOT limited to the above areas, in case you have worked on any additional aspect which focuses on innovation and adopts a fresh approach, please elaborate here.

c) yourSoftware Story

Well this can be a story about any software experience - catching a bug, killing a bug to recruiting a computer engineer into your team, any failure or success while building the vehicle software. Bring out the storyteller in you!