Audi’s Smart Factory Hackathon: 25 hours to devise new software ideas

- Programming competition with around 80 participants from ten countries
- Students and young professionals develop digital solutions for the factory of the future
- Audi implements best prototypes in production

Ingolstadt, October 6, 2017 – Startup spirit with Audi’s Smart Factory Hackathon: From October 4 through October 6, the Audi Forum Ingolstadt played host for the second time to all things big data, machine learning, algorithms and data visualization. Around 80 talented data scientists from around the world developed software solutions for the factory of the future, on the basis of real data sets from Audi Production. The “Tricycle” team won the programming competition. The students from Karlsruhe and Munich convinced the jury with their idea on “Defect mapping in body manufacturing.”

Following its successful premiere last year, the Smart Factory Hackathon is now in its second round. Various Audi departments from the Press Shop, Body Shop, Assembly and Logistics had provided real, anonymized data sets. True to the motto “Data drives our production – You innovate from our data” the programming geniuses in groups of three to five participants with expertise in IT, math or communications design fine-tuned digital solutions for the specified problems. To do so, they had 25 hours, based on Audi’s 25th hour – the “extra hour”. This extra hour stands symbolically for the time gained with autonomous driving. The six-strong jury of Audi experts, external IT specialists and business consultants assessed the results. Technical methodology, user-friendliness, value added and type of presentation are key elements in the overall verdict. The audience’s votes were also incorporated into the assessment.

The two jury members from Audi – Tarek Mashhour, Head of Production Central Functions, and Chief Information Officer Mattias Ulbrich – sponsored this year’s Smart Factory Hackathon. Tarek Mashhour was full of praise: “For these talented data scientists our Hackathon is the ideal platform to demonstrate their skills. They provide us with valuable impetus on how we can tackle big-data activities. In return we aim to promote their innovativeness and provide them with a springboard for their own startup.” Mattias Ulbrich says: “We are constantly on the lookout for new use cases in line with today’s digitalization trends. In this respect, the Smart Factory Hackathon is a key component. This year too, it was very inspiring for me to see the kind of passion and dedication shown by these young, creative minds as they set about creating new software solutions for Production and Logistics –
and to do so in just 25 hours. I am really looking forward to seeing the concepts fine-tuned with the teams.”

Maximilian Backenstos, Svenja Seip and Niel Wagensommer alias “Tricycle” had chosen the topic “Defect mapping in body manufacturing.” They developed a linear model that enables potential defects in the body dimensions to be predicted early on. Using this system, minor value deviations can be used to establish where defects might develop later on and how these can be prevented beforehand. This provides greater process stability and prevents rejects.

The Hackathon received just under 170 applications; 80 participants, split up into 19 teams from countries such as India, Egypt, Germany and Israel, made it to the competition stage. A plant tour gave the participants an initial feel for the upcoming task. In the factory, Audi experts from Production and IT explained to them the current and future challenges. They also subsequently mentored participants, helping them elaborate the competition entries.

The company is currently driving forward around two thirds of the ideas from the first Smart Factory Hackathon in 2016 and integrating them into production in cooperation with the teams. This year too, Audi will follow up on the most promising solutions with the Hackathon participants and implement them in production. The three best-placed teams will also be treated to an Audi driving experience.

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The Audi Group, with its brands Audi, Ducati and Lamborghini, is one of the most successful manufacturers of automobiles and motorcycles in the premium segment. It is present in more than 100 markets worldwide and produces at 16 locations in 12 countries. 100 percent subsidiaries of AUDI AG include Audi Sport GmbH (Neckarsulm), Automobili Lamborghini S.p.A. (Sant’Agata Bolognese, Italy) and Ducati Motor Holding S.p.A. (Bologna, Italy).

In 2016, the Audi Group delivered to customers about 1.868 million automobiles of the Audi brand, 3,457 sports cars of the Lamborghini brand and 55,451 motorcycles of the Ducati brand. In the 2016 fiscal year, AUDI AG achieved total revenue of €59.3 billion and an operating profit of €3.1 billion. At present, approximately 88,000 people work for the company all over the world, more than 60,000 of them in Germany. Audi focuses on sustainable products and technologies for the future of mobility.