

Certificate

This is to certify that

Neetu Pundir

has been part of the successful group work of the cooperation project with the Hochschule für Technik und Wirtschaft Berlin. Within the course of studies "Project Management and Data Science" the students worked on a BMW project called

"Object detection with Deep Learning"

During this project the student teams found an approach how to detect dents and scratches on vehicles in automotive production. Furthermore they illustrated the high complexity to ensure a robust object detection. The key elements of the agile project enforcement have been:

- Collecting pictures
- Labeling of pictures
- Building model
- Testing
- Refining model

Company

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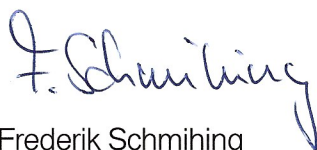
**Registered in
Germany**

München HRB 42243

We thank you for your commitment and wish you all the best for your future endeavors.

Munich, November 20th 2019

Bayerische Motoren Werke Aktiengesellschaft
Innovation, Digitalization, Data Analytics at BMW Production System



Frederik Schmieling
Doctoral student for Data Analytics



Matthias Schindler
Cluster responsible for Data Analytics