Department of Informatics Julius-Albert-Str. 4 · D-38678 Clausthal-Zellerfeld

TO WHOM IT MAY CONCERN

Clausthal-Zellerfeld, 2015-04-23

Reference for Mr. Aditya Raj

I confirm that Mr. Aditya Raj worked as a student intern in the Department of Informatics at TU Clausthal from December 10<sup>th</sup>, 2014 until April 24<sup>th</sup>, 2015. He participated in the research project "Agent-based simulation of cooperative driving maneuvers of autonomous cars".

During his stay he investigated and evaluated the agent-oriented simulation platform AgentDrive, which enables modelling and simulated execution of cooperative manoeuvres. He specified, modelled and simulated selected maneuvering scenarios with focus on local and collective decision-making functions for planning and coordination.

The goal of his project was to design a cooperative driver model, which would improve the usage of free capacities of highways, with an underlying reactive behavior architecture.

During his internship Mr. Raj implemented a basic model in Java using Applet programming to demonstrate manuever planning and execution in 2D representation of vehicles and lanes. He also went to Czech Technical University in Prague from February 15<sup>th</sup> to 20<sup>th</sup> to establish a first exchange of knowledge for a joint work on the AgentDrive plattform. He created a simulation model by extending AgentDrive classes to demonstrate the idea of cooperative maneuvering in a 2D and 3D environment with OpenDS.

Mr. Raj showed a great interest our field of research and techniques used in our research group. He was always motivated and dedicated, and finished his tasks rigorously and completely. We will be happy to host him again in our research group at any time. For his future career, we wish him all the best.

Clausthal, April 23rd, 2015

Prof. Dr. Jörg P. Müller

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