*Qiao Ren* has successfully finished her Personal Pursuit and can be granted

ATLAS-student: *Qiao Ren*

Student number: s1618067

Date: 18-8-2016

Certificate

6 EC’s.

Starting point for the Personal Pursuit of Qiao Ren were her personal experiences with the metro system in Paris. She questioned the efficiency of Paris metro compared to other large cities with a metro (as Shanghai or Berlin). Based on this experience she wanted *‘to grasp the basics and nature of a public metro system from an engineering point of view’*. Qiao recognized that the theory and practice of Public Transport is largely founded on Operational Research (the main topic she wanted to focus on for this study year).

After discussing her aims and possible challenges within the field of Public Transport the Personal Pursuit was defined as:

Development of an application (in Python) for educational purposes where students can define Public Transport systems in a schematic situation in order to optimize the service (in terms of travel time for the passengers, passenger trips, exploitation costs, etc.).

Ideally the result (the Python application) could be use in a new to develop Public Transport course. Giving students the opportunity to study the offset between the many (and sometimes conflicting) goals in designing a Public Transport system.

The goal Qiao had set herself was very challenging as she was unfamiliar with: Transportation Modelling in general; several Operational Research methods which find their application in Transportation Modelling; programming in general and Python in specific.

It was not an easy task for Qiao to get grip on all these matters with just limited support within the available time frame. With great determination and focus she succeeded in design, develop, test and apply the aimed application.

The result is an application which seems versatile and stable enough to be used in a Public Transport course. In the course students will be challenged to in designing ‘the best’ Public Transport system.

ing. K.M. van Zuilekom

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