Ximantis AB
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Sweden

Letter of Committment for Project SMARTHEP

November 30, 2017

Ximantis is a Swedish traffic forecasting company founded in 2014 and is part of the Lund University Innovation System. Ximantis is able to produce forecasts of upcoming traffic congestion in real time thus allowing users to avoid them. The forecasting capabilities of Ximantis has been repeatedly tested and validated on different occasions in real traffic with data provided by the Federal Traffic Safety Administration of the USA. It has been shown to be capable to produce detailed traffic evolution and congestion information at a specific, chosen, road locations and specific future times. This capability in turn allows for significant savings in time and energy resources. Given the huge impact of traffic in CO2 emissions and other harmful particulates as well as the waste of precious energy recourses due to congestion the environmental benefits proposed by the Ximantis forecasting provide clear incentives for this technology.

The forecast ability of Ximantis relies on the extensive traffic experience behind the team as well as advanced technical and mathematical innovations involved. Specifically Ximantis holds a patent on an innovative stochastic process which it couples against a machine learning algorithm in order to produce real time forecasts using a Monte Carlo simulation. The computation takes place on the Amazon Web Servers using both historic as well as real time driver information from the region in question and can be transmitted to drivers in real time via the Ximantis app as well as to traffic authorities.

Commitment in the SMARTHEP project

Ximantis believes in the importance of the SMARTEP project and commits to participate with scientific advising, supervising of task participants as well as advanced computational resources in order to carry out the proposed tasks but also participate in the overall SMARTHEP project in an advisory nature.

Specifically:

- The current CEO and Founder, Alexandros Sopasakis will provide scientific supervision and practical know-how to up to 3 students involved in the proposed research tasks each of which will range from 3 to 9 months in duration.

- Ximantis AB will provide access to a fast parallel machine which includes both a number of Intel cores as well as a Tesla GPU in order to carry out some of the demanding and necessary computations envisioned in the training of the AI for a proposed convolutional neural network.
- Ximantis will contribute with relevant presentations and also participate in workshops organized by SMARTHEP.
- A person from the company will assist in the overall SMARTHEP project in an advisory status.

The tasks envisioned by Ximantis are designed to have a stepwise structure which allows for completion of different pieces by different teams not of all which need to be taken successively. As a result the project supervisor (Alexandros Sopasakis) will be responsible for coordination of different teams and appropriation of relevant resources as different tasks are completed and different tasks will need to be assigned.

Deliverable Materials and IP

All materials produced through this cooperation shall be available for Ximantis to use without the need for expressed consent by the students who have partially or fully contributed to them. Ximantis and each prospective student will negotiate, before the beginning of the work, how IP will be handled. Specifically, in the case that students wish to participate and share with Ximantis in any possible IP rights which resulted as part of their work the student will also need to equally share the associated expenses and related filling work.

Expenses

Expenses incurred by Ximantis during the actual training of the students towards fulfillment of this commitment will need to be reimbursed by the SMARTHEP project.

Ximantis AB

By: 

Name: Alexandros Sopasakis

Title: Ximantis AB, CEO