



ClearWay Project Internships Summer 2025

The ClearWay Project¹

The ClearWay¹ project at TCD is exploring ‘slot-based driving’ (SBD) as a strategy for active management of roads. SBD abstracts traffic as flows of slots with each slot having a specified trajectory. Vehicles are associated to slots and their trajectories are intended to follow those of their assigned slots. In practice, depending on the level of control available and/or the degree of compliance of drivers with guidance, vehicles may depart from their slots. However, slots provide an abstraction over which the road traffic management system can reason and exercise control. In particular, we are exploring the use of reinforcement learning to have controllers learn appropriate slot-management strategies.

Internship project: Model-based RL for Autonomous Driving

This project will investigate applicability of model-based RL (MBRL)² in transportation and autonomous driving.

Skills required:

Excellent computer programming skills in Python as well as previous experience of autonomous driving simulators and reinforcement learning.

Application details:

The positions are full-time and tenable immediately for up to twelve weeks (expected to finish no later than the 31st of August 2025). As full-time positions, applications from continuing students enrolled in full-time courses who have coursework to complete over the summer months (e.g., a dissertation) are not eligible.

Continuing students will be paid a stipend of EUR500 gross per week for the equivalent of a 39-hour week (and may be eligible to avail of a tax exemption). Students who have recently completed their degrees will be paid at point 1 of the SFI Team Member Budget Scale for Research Assistant (equivalent to EUR32,962 per annum).

Please send applications by email to ivana.dusparic@tcd.ie quoting “ClearWay Internship” in the subject line and containing only a single PDF file with your CV (including University grades, the contact details of two referees, and details of any software projects that you have undertaken that illustrate your suitability for the position.

Closing date: 12.00noon BST on Tuesday the 20th of May 2025.

¹ The *ClearWay* project is supported by the SFI Frontiers for the Future Programme under award number 21/FFP-A/8957 from 2022 to 2026.

² Drama: Mamba-Enabled Model-Based Reinforcement Learning Is Sample and Parameter Efficient
<https://arxiv.org/abs/2410.08893>