Optimization of 1D Simulation Processes with GT-Automation

- > Supporting companies: GammaTech Engineering (GTE) and Aston Martin Lagonda (AML)
- Start date: March 2025
- Project duration: 6+8 months
- □ Site:
 - GTE's offices in Turin
 - Possible visits to AML in Gaydon (UK)
- Compensations: Meals, travel expenses
- Motivations and Project Scope
 - In this MSc thesis project, the student will work on Vehicle Thermal Management models of different AML vehicles to streamline and automate the 1D simulation workflow.
 - The work environment will be the 1D-CFD multi-physics simulation software GT-SUITE, including its internal automation tool GT-Automation (Python scripting required).
 - The process optimization activities will involve different aspects of the simulation workflow: model set-up and update, import of external data, calibration, postprocessing of results, deployment on Git repository, etc.
 - update, import of external data, calibration, postprocessing of results, deployment on Git repository, etc. The outcomes of this activity will help AML accelerate model preparation and simulation tasks by automating timeconsuming processes and routines that currently require user intervention, thereby enhancing the potential of 1D CAE virtual analyses to support vehicle development.



ASTON MARTIN



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