



virtual  vehicle

VIRTUAL VEHICLE is a leading international R&D center for the automotive and rail industries. The center focuses on advanced virtualization of vehicle development. This linking of numerical simulations and hardware testing leads to a powerful HW-SW system design. About 300 people are now employed at our site in Graz - their expertise enables the efficient development of affordable, safe and environmentally friendly vehicles.

## Master Thesis

### “State Estimation for Batteries using Machine-Learning on Embedded Device”

Ref.Nr. E\_141

Master Thesis

### Your Tasks

- Familiarize with Lithium-ion battery systems.
- Literature study on Machine-Learning algorithms for state estimation for Lithium-ion batteries.
- Choosing the appropriate ML-algorithms for the given HW.
- Integration and evaluation of the chosen algorithms on existing HW.
- Testing on real cells.

### What we expect from you

- Study Information & Computer Engineering, or Electrical Engineering, or Computer Science, or similar.
- Basic knowledge of:
  - ML-architecture for time series problems
  - Python
  - Embedded programming
- Interest to study basics about Lithium-ion batteries for e-mobility.
- Proactive, committed working style.

### What we offer

- Collaboration and contribution in an engaged, dynamic team
- Interesting work in an international research center
- **Paid** Thesis
- Mentoring program for new employees'
- Diverse sports and health activities regularly
- Corporate Events

#### For technical questions please contact:

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### APPLY NOW and JOIN OUR TEAM

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