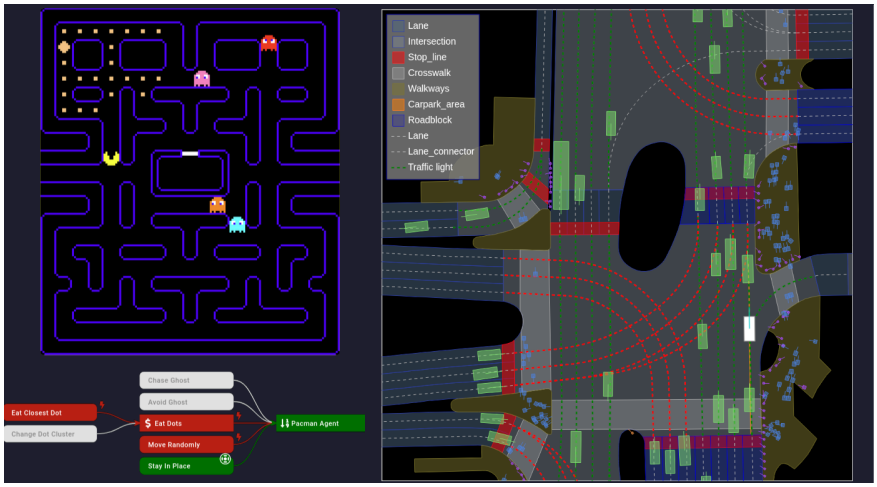
Karlsruhe Institute of Technology

Student Assistant



Arbitration graph for decision-making in a toy example (left). Example data from NuPlan dataset (right).

Machine Learning in Autonomous Decision-Making

We are seeking a motivated and skilled student assistant to support research focused on decision-making and behavior planning in autonomous driving. This position will involve various responsibilities related to the maintenance and feature development of an open-source library[1] for behavior planning and decision-making in autonomous systems. You will work on implementation an behavior generation & motion planning stack for the nuPlan dataset, a key resource for evaluating autonomous driving algorithms.
An additional task will the preparation of machine learning environments to facilitate experimentation and analysis. You will gain hands-on experience in cutting-edge technology and contribute directly to the advancement of autonomous driving systems.
This role is an excellent opportunity for anyone looking to deepen their understanding of machine learning, behavior planning, and decision-making in the context of autonomous vehicles while making tangible contributions to the development of a valuable research resource.

I am happy to answer any questions you might have. Feel free to just send me an email!

[1] `github.com/KIT-MRT/arbitration_graphs`.

Institute of Measurement and Control Systems (MRT)
Prof. Dr.-Ing. Christoph Stiller

Advisor:
Nick Le Large, M.Sc.

Programming language(s)[1]:

C++	proficient
Python	advanced

System, Framework(s):
Linux, Docker, PyTorch

Required skills:
- Prior experience with machine learning
- Prior knowledge of motion planning
- Capable of working independently

Language(s):
German, English

For more information please contact:

Nick Le Large

Room: 234
Phone: +49 721 608-43794
Email: nick.lelarge@kit.edu

Or directly send in your application including your current grades as well as our questionnaire!

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[1] **skill levels:**

beginner	< 500 lines of code (LOC)
advanced	500 – 5000 LOC
proficient	> 5000 LOC