



Start your mission at DLR

Institute of Communications and Navigation in **Oberpfaffenhoffen** is looking for a

Bachelor/Master student (w/m/d) studying Engineering (e.g. Computer Science or Electrical engineering or similar) for

Environment Design and Data Acquisition using Unreal Engine

Your Mission:

We are developing new reliable navigation systems within the framework of various projects for autonomous Urban Air Mobility (UAM). The vehicles generally operate in urban environments where highly accurate navigation is required, but the performance of satellite navigation can be degraded due to local effects. Therefore, we are developing camera-based localization to support safe takeoff/landing at vertiports. To test the visual positioning algorithms, we are planning to obtain realistic data using Unreal game engine, without frequently conducting outdoor experiments. Join us to solve this challenge if you are looking for a student job!



Your tasks:

- Design simulation environments, such as vertiport area including visual markers and street views, using Unreal engine and AirSim plug-in
- Design traveling routes in the environment for different scenarios (automatic flights using waypoint navigation)
- Acquire datasets for the designed simulation scenarios (including images, ground truth trajectories & orientation, internal & external calibration)
- Test visual navigation algorithms using the acquired data

Your Qualification:

- Bachelor or Master students majored in Engineering (e.g. Computer Science or Electrical engineering or similar)
- Basic knowledge of visual navigation and projective geometry
- Initial experiences with Unreal engine and Airsim plug-in will be highly appreciated
- Initial 3D modelling experiences with other tools such as Blender will be appreciated
- Solid experiences and skills with Python and Good knowledge with C++
- Highly proficient in spoken and written English

Contacts:

Please send your CV/Cover letter/Transcripts of your BS&MS to the following to Dr. Young-Hee Lee (Young-Hee.Lee@dlr.de)

We offer a pleasant working atmosphere in an international research and development group. You can have flexible working hours according to your study plan. Individual arrangement for mobile working is also not an issue for us. If we have made you curious, please feel free to contact us!

