



## Design and Development of a Mobile Airspeed Sensor (Design/Experimental)

**Project Overview:** This engineering project focuses on the design, development, and physical realization of a compact, mobile airspeed sensor system intended for use on drones, eVTOL platforms, and experimental flight test beds. The sensor unit is conceived as a clip-on device — lightweight, adaptable, and deployable across a variety of aerial platforms without permanent installation.

### Project Scope:

- Mechanical design and 3D-printed housing of a compact, clip-on sensor unit
- Integration of an airspeed sensor (e.g., pitot-static or differential pressure based) with onboard data logging
- Wireless data readout via Bluetooth for post-flight or real-time analysis
- Implementation of a small onboard display showing live airspeed
- Microcontroller-based system architecture (Arduino or equivalent)
- Validation and functional testing on a suitable platform

### Your Profile:

- Enrolled in a Bachelor's program in Aerospace, Mechanical, or Electrical Engineering, or a related field
- Hands-on experience or strong interest in embedded systems and microcontroller programming (Arduino)
- Experience with 3D printing and CAD modeling is an advantage
- Motivated to bring a hardware project from concept to working prototype
- Able to work independently and document progress systematically

### What we offer:

- An applied, hands-on project with tangible results
- Supervision and technical support from our research group
- Access to lab facilities, 3D printers, and hardware components

**Start Date:** April 2026

**Language:** English/German

### Contact:

Lukas Gaugelhofer

Institute for Rotorcraft and Vertical Flight

E-mail: [lukas.gaugelhofer@tum.de](mailto:lukas.gaugelhofer@tum.de) Tel: +49 (0)89 / 289-16313