Zdeněk Bouček
Senior UAV Control Engineer | Drone Programming | Python/MATLAB/ROS

SUMMARY

Developing and optimizing model-based and data-driven algorithms for UAV trajectory planning, control, and autonomous decision-making. Combining AI, optimization, and simulation to enable intelligent flight systems.

TECHNICAL SKILLS

Main Technical Skills	MatLab, Python, Git
Programming Languages	Python
Version Control	Git
Third Party Tools / IDEs / SDK / Services	MatLab

POSITIONS

- 2015–present — Researcher, NTIS, UWB (Identification and Decision Making group)
- 2015–present — Tutor, Campo Arduino & Campo Lampone summer schools
- 2024–present — Freelance Consultant and Developer on Upwork

PROJECTS

- **DronePort Autonomous Battery Swap Station** — traffic control and mission planner for persistent UAV operations.
- **Interpolating Control for Trajectory Tracking and Setpoint Control** — interpolation-based optimal control for real-time trajectory tracking.
- **Interpolating Control for UAV Trajectory Tracking** — efficient controller blending MPC and explicit interpolation for UAVs.

SPECIALIZED TRAINING

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  - **The IEEE RAS Summer School on Multi-Robot Systems 2020, 2022** Attendance of lectures with emphasis on multi-robot systems, practical solution of UAV leader-follower task and inspection of power lines using two UAVs.

- **Self-Driving Cars with Duckietown** Completed an online MOOC on autonomous vehicle algorithms, including computer vision, state estimation, reinforcement learning, and planning, using Duckietown simulation tools.
- **E-Knot Training Course on Multi-Sensors Navigation 05/2017** Covered GNSS principles, challenges, and state-of-the-art, explored methods to improve navigation quality, including INS and SLAM techniques

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