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EVIA

SPIN-OFF FELLOWSHIP, 2. AUSSCHREIBUNG, 3. EINREICHFRIST (SEPT. 2024)

Projektkurztitel:	**EVIA**
Projektlangtitel:	**Efficient Visual Intelligence for Autonomous Driving and Mobility**
Antragstellende Organisation:	**Technische Universität Wien**
Fellow:	**Zahra Babaiee**
Host:	**Univ.-Prof. DI Dr. Dr. Radu Grosu**
Projektstandort:	**Wien**
Laufzeit:	**01.03.2025 – 31.08.2026**
Gewählter Schwerpunkt:	**Bahnbrechende Innovationen (Förderung mit Mitteln der Nationalstiftung für Forschung, Technologie und Entwicklung (NATS) aus dem Fonds Zukunft Österreich (FZÖ))**

PROJEKTZIEL:

Recent advances in Artificial Intelligence have underscored the importance of embodied AI—intelligent agents that interact with their physical environments via sensors. Vision is a critical component for most embodied systems, requiring sophisticated camera data processing. The goal of this project is to develop and train efficient yet highly capable vision models to be used on edge devices and embedded systems for autonomous navigation. We will develop a novel vision model that achieves comparable performance to state-of-the-art models while utilizing far fewer parameters. We'll build on our previous research findings to create an efficient model designed for adaptability across various environments with minimal fine-tuning, with specific application in autonomous driving systems. Success will be measured by the model's parameter efficiency, computational requirements, and practical implementation in autonomous systems. We will practically deploy our models on small robot cars without reliance on LiDAR (camera only) and test them in real-world environments to validate their performance and reliability.

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VISION SPIN-OFF:

- Our vision is to transform how vision models operate in embodied AI applications, particularly in resource-constrained environments. We believe efficient vision processing is essential for autonomous systems that must operate in real-time without relying on cloud connectivity. By reducing computational requirements while maintaining high performance, we'll enable advanced vision capabilities directly on edge devices, from autonomous vehicles to drones and robotics. This approach addresses the practical challenges faced by embodied AI systems that need to process and respond to visual information immediately in dynamic environment.

Weitere **Information zum Spin-off Fellowship** finden Sie auf der FFG-Homepage.

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