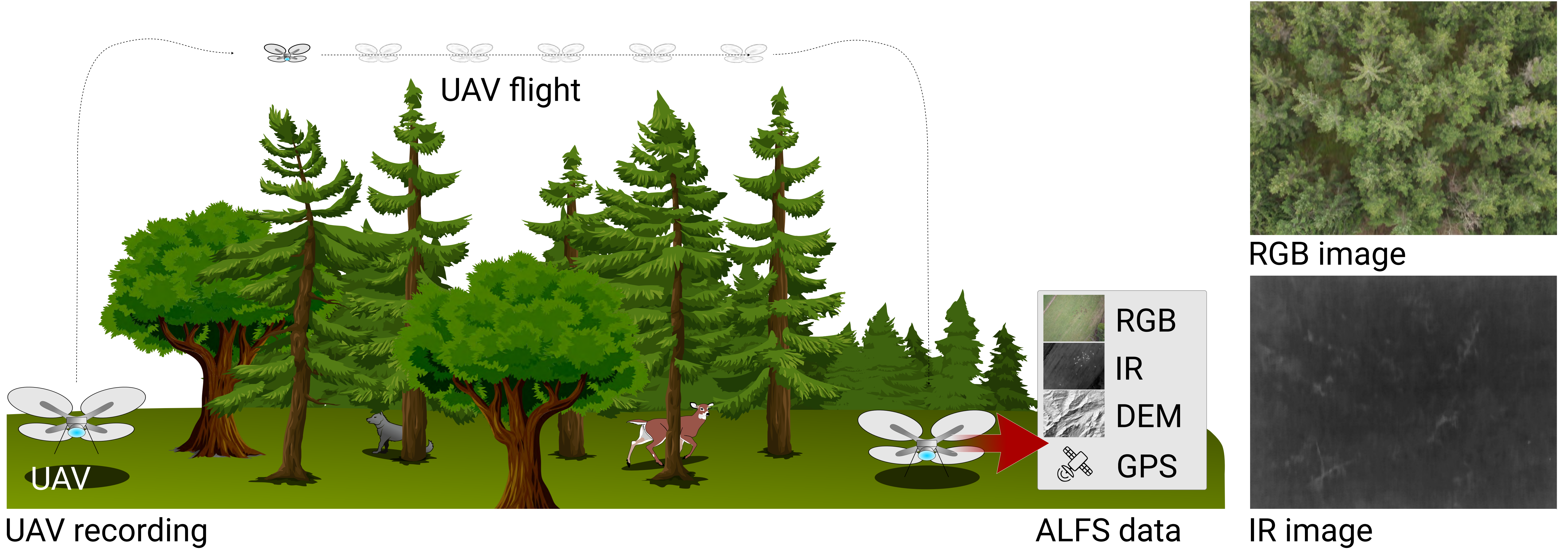


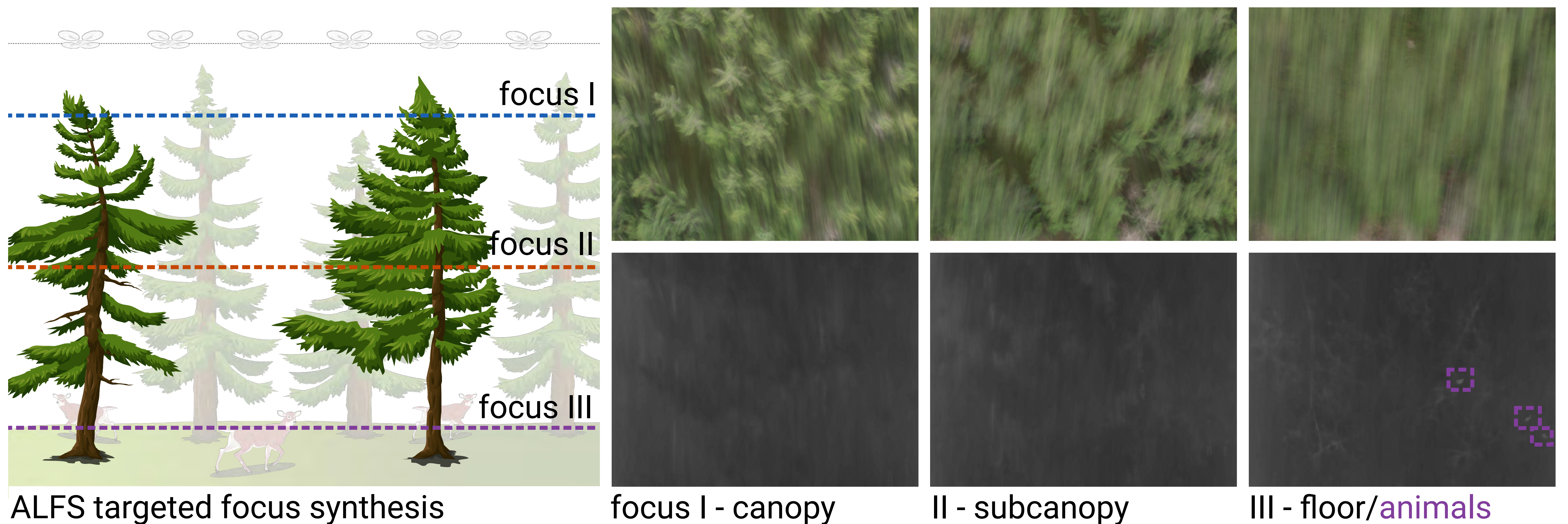


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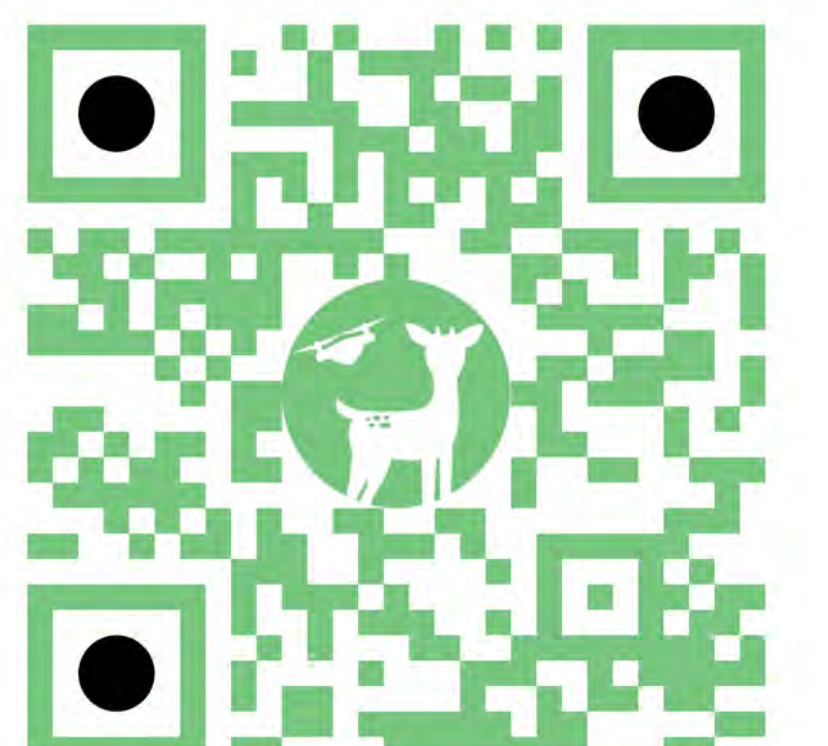
Biodiversity Airborne Monitoring  
Based on Intelligent UAV sampling



The BAMBI research project utilizes Airborne Light-Field Sampling (ALFS) to monitor wildlife populations in forested areas. ALFS is an innovative technique designed to overcome the challenge of occlusion caused by vegetation or other visual obstructions. It leverages light field technology to merge a sequence of color (RGB) and infrared (IR) camera images captured during a UAV flight, along with positional data (GPS) and a terrain model (DEM). This combined dataset allows for targeted focus synthesis and analysis of objects at specific distances, such as the canopy and forest floor, thereby revealing ground-dwelling animals. As part of the BAMBI project, an AI-assisted system will be developed that harnesses ALFS. This system aims to detect and classify animals in both forested and open terrain, facilitating comprehensive and accurate monitoring of animal populations. The research project encompasses recording training data, training the AI model, and evaluating its performance.



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