Offre de stage M2 / M2 Internship offer

Title: Integration of Visual Language Action Model for mobile robotic control
From 1/02/2026 to 30/06/2026, 5 months.
Laboratory: Gipsa-Lab, 151 rue de Mathématiques, Saint Martin d'Hères.
Contact: J.-Ernesto GOMEZ-BALDERAS (PICSA Team)

Subject:
Vision Language Action Model (VLA) has proved potential to teach robots new skills and as a component in modular systems for task planning and execution. Such models are fuse robot control actions directly into Visually-conditionned language models (VLM) backbones, which are trained on Internet-scale data to generate natural language from input images. Existing works on VLA either focus on training and evaluating in a single robot or simulated setups.
Therefore, by carrying out this work, which considers a mobile robot evolving in many environments that allow the use of continuous states and spaces.
In this project, will use visual features with a Llama language model for robotic control (RT2) by processing an image, extracting visual features and mapping it to robotic actions. Trainee will create a projector to converter these actions into executable robot commands, that will send to mobile robot in real time.
To proof our methodology, will be used: Open VLA, PyBullet and Tello drone. The first tool is an open source VLA trained on 970k robot episodes from the Open X-Embodiment dataset, it supports controlling multiple robots. Second tool, is a Python module for physics simulation, robotics, and machine learning. It's known for its lightweight nature and real-time simulation capabilities. PyBullet is particularly popular for reinforcement learning and provides a very direct and easy-to-use Python API. In order to test in a real robot platform, executable robot commands will send to a Tello drone platform.

Tasks:
- Create a feature extractor and integrate it to Vision Language Action Model
- Develop an Action to command projector
- Once converted by the projector, these executable commands will be send to a drone platform for physical evaluation



To apply, please send to gomezbaj@univ-grenoble-alpes.fr :
1) Your CV
2) Motivation letter and
3) Recommandation letter