Image Processing Computer Vision AI

Co-funded by the Erasmus+ Programme of the European Union

Internship Proposal Form

Erasmus Mundus Joint Master in

Artificial Intelligence in Image Processing and Computer Vision (IPCVai)

Institution/Country:
PPKE-ITK, Hungary
Title:
A Foveated Two-Stream Vision Model for Dynamic Mismatch Detection
Short description (max. 100 words):
Today's computer-vision systems recognize objects well, but remain less reliable when understanding depends on where and when a scene changes. This project investigates why people viewing a virtual tunnel showed no peripheral advantage in detecting unexpected motion, although peripheral vision is motion-sensitive. The student will adapt and cross-validate a modern two-pathway video model, adding foveated appearance processing and location-specific motion analysis, and compare it with optical-flow and single-stream baselines. The resulting framework will test whether background motion, architectural limitations or stimulus design explains eye-tracking, behavioural and 64-channel EEG data from over 100 participants, with potential for a publishable result.
Expected start/end dates:
After exam period in January
Type of contract (contract / scholarship):
TBD
Dedication (hours/week):
Curiosity driven, aim is a conference or journal publication at the end
Reference salary (€/month):
In order to apply, please contact:
hillier.daniel@itk.ppke.hu hillierlab.github.io