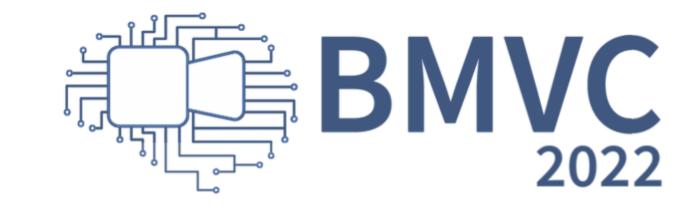


VL4Pose: Active Learning Through Out-Of-Distribution For Pose Estimation

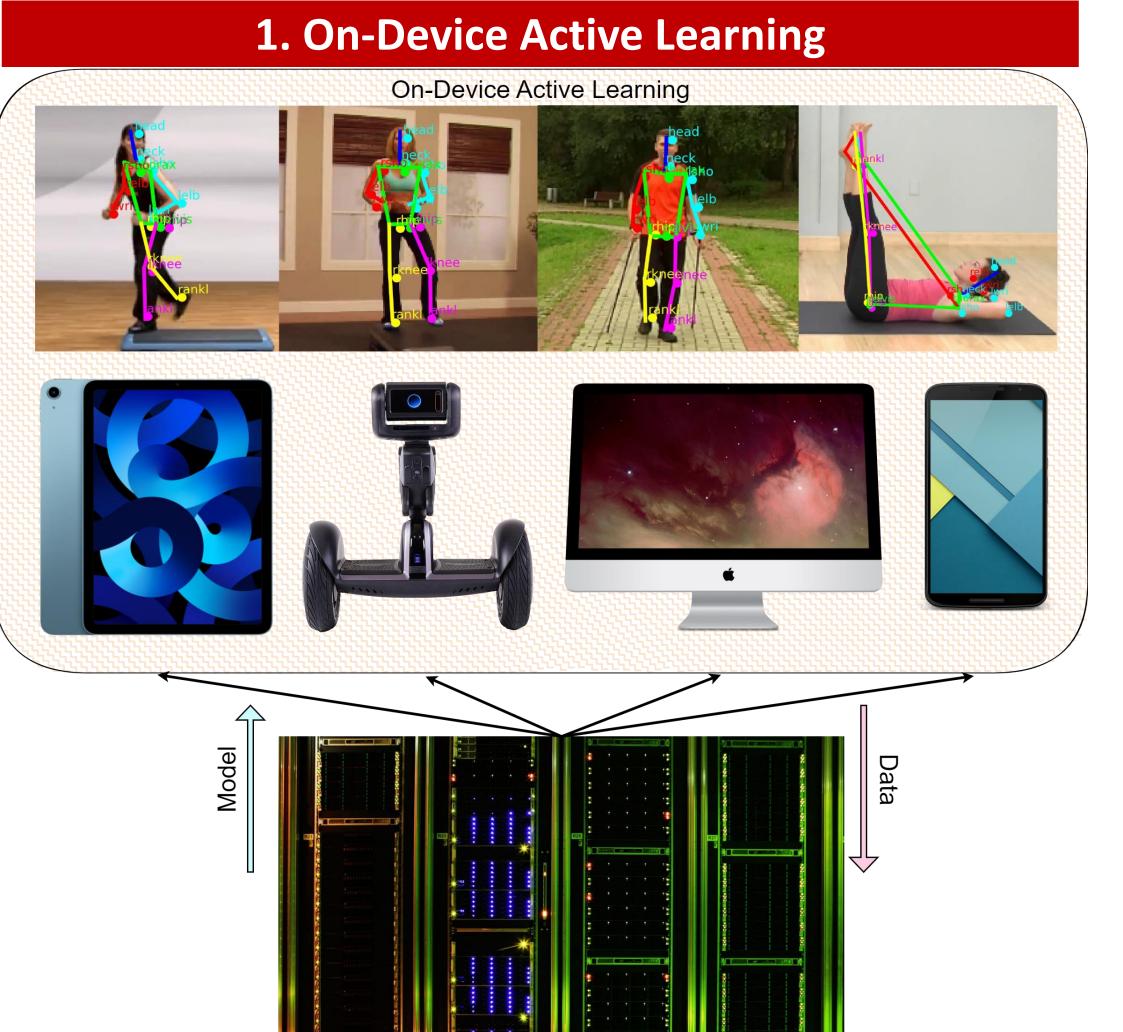
Mercedes-Benz Research and Development India ²

Roshan Roy 3 * Pankaj Singh 2 * Shuaib Ahmed 2 Alexandre Alahi 1 Megh Shukla ¹

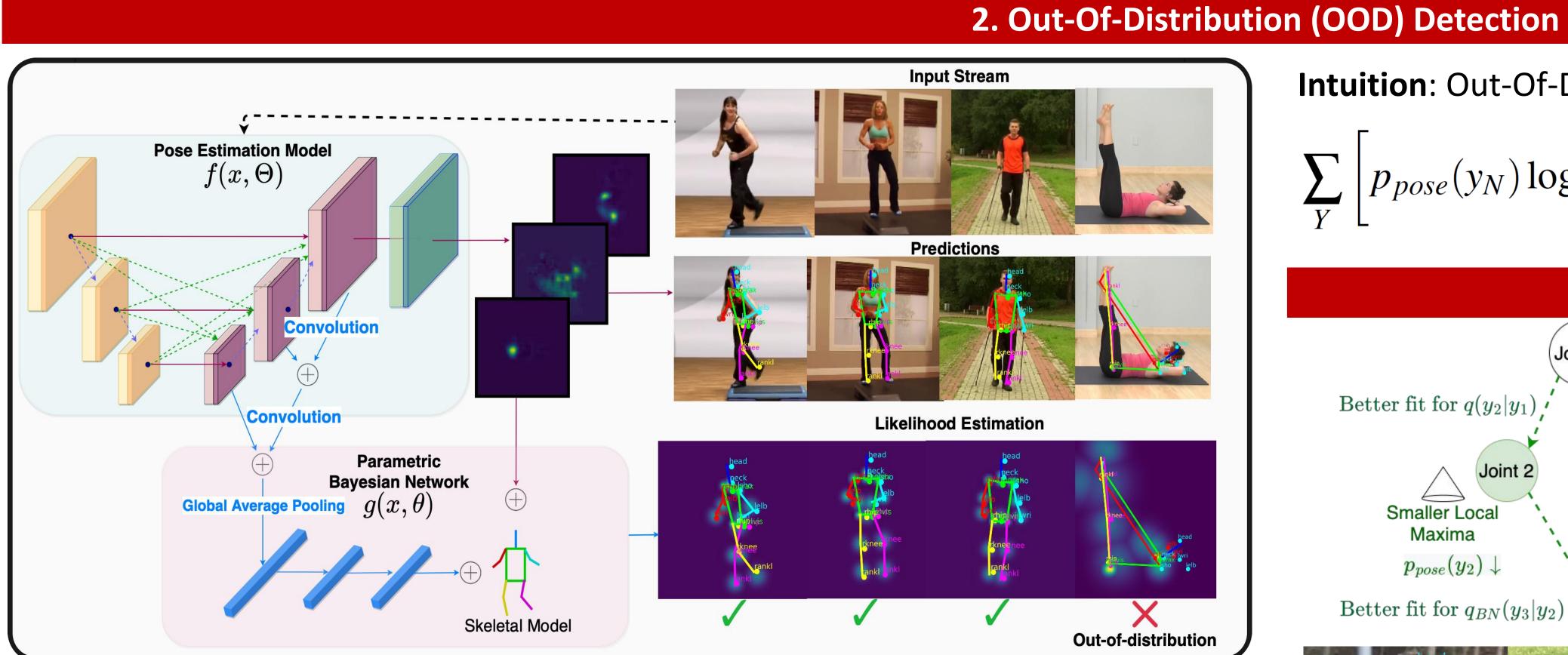
Lockheed Martin Corporation ³



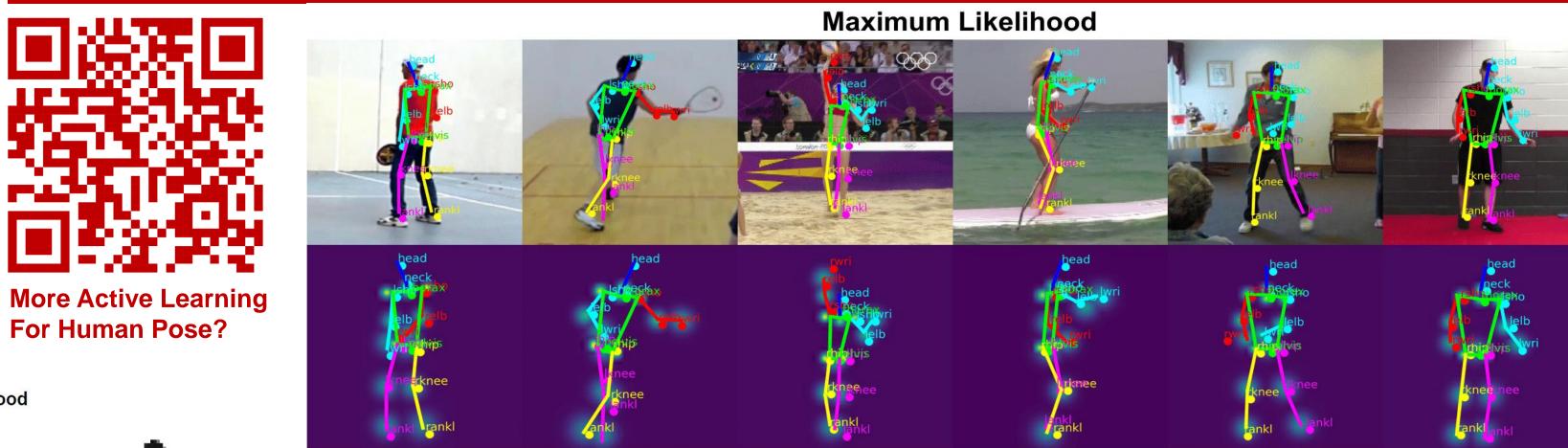
École Polytechnique Fédérale de Lausanne 1



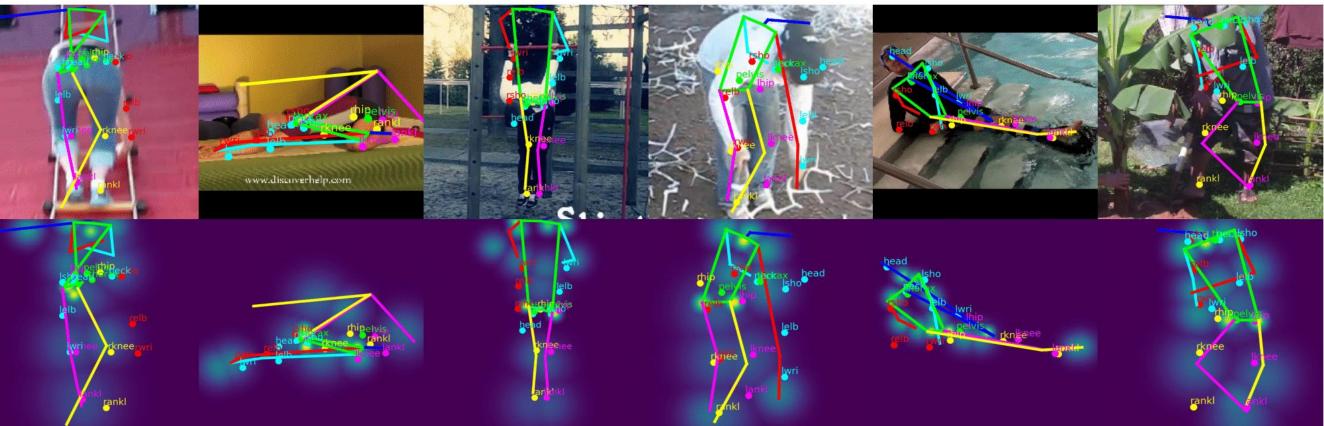
Motivation: On-device computing is limited; can we develop an algorithm with low compute footprint while maintaining performance?



4. Results: Qualitative



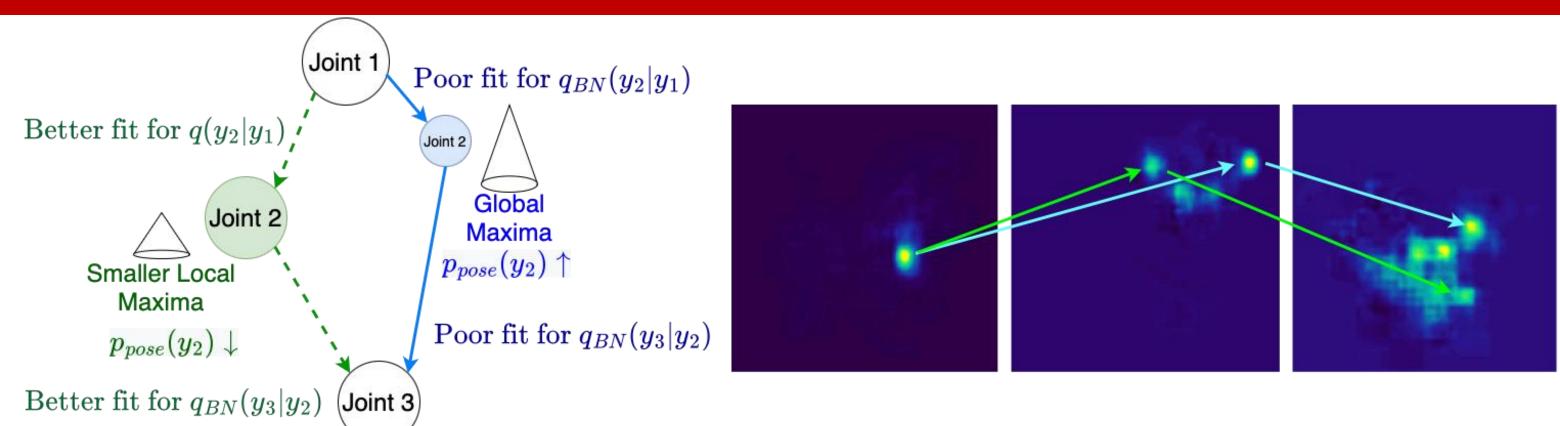
Minimum Likelihood

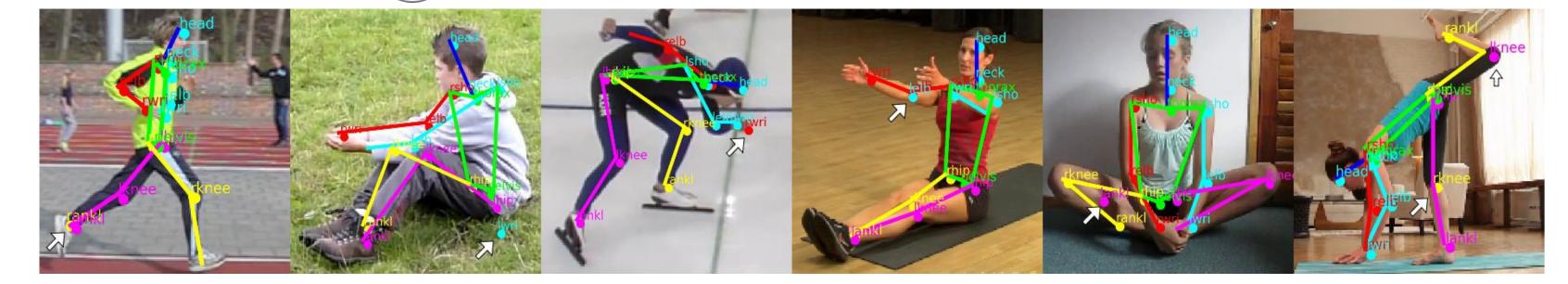


Intuition: Out-Of-Distribution = Maximize the likelihood of training poses

$$\sum_{Y} \left[p_{pose}(y_N) \log q_{BN}(y_N|x,\theta) + \sum_{i}^{N-1} p_{pose}(y_i) \log q_{BN}(y_i|y_{i+1},X,\theta) \right]$$

3. Pose Refinement





5. Results: Active Learning

