

# Unsupervised Model Personalization while Preserving Privacy and Scalability: An Open Problem



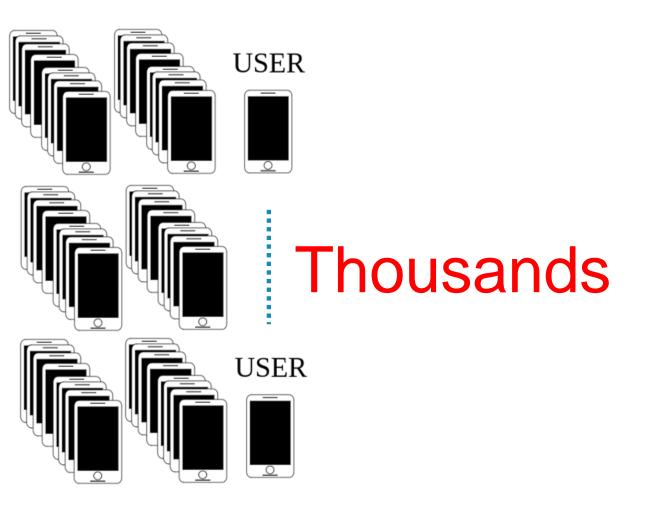








## Scalability

















## Privacy













## Supervision







**NO LABELS** 

**USER** 





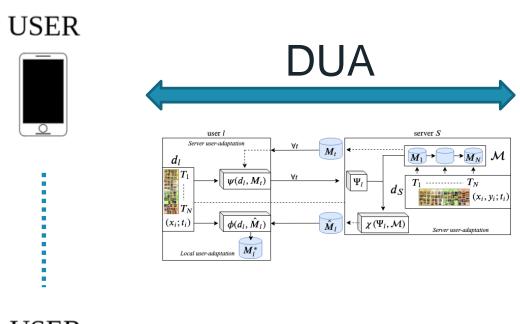


**KU LEUVEN** 





## Dual User-Adaptation framework (DUA)



### **SERVER**



**USER** 







**KU LEUVEN** 

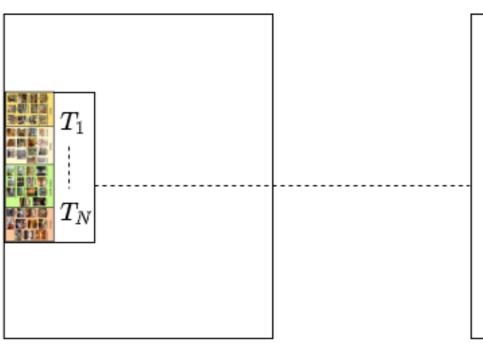


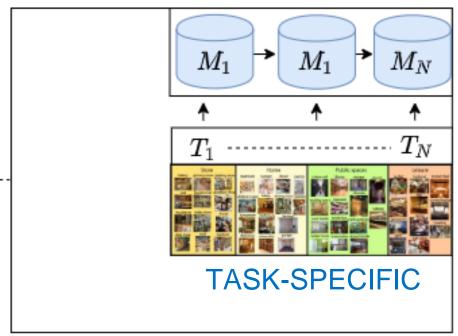


### (1) Serverside Adaptation

USER







**SERVER** 



√ Scalable







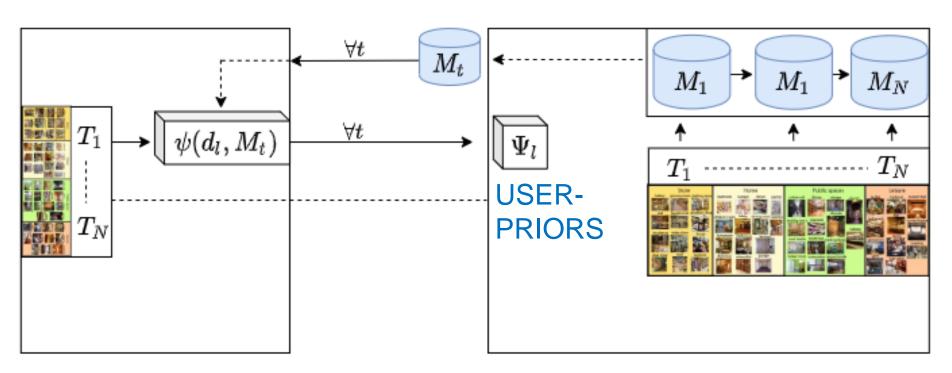




## (1) Serverside Adaptation

#### **USER**





### **SERVER**



- √ Scalable
- ✓ Unsupervised
- ✓ Privacy





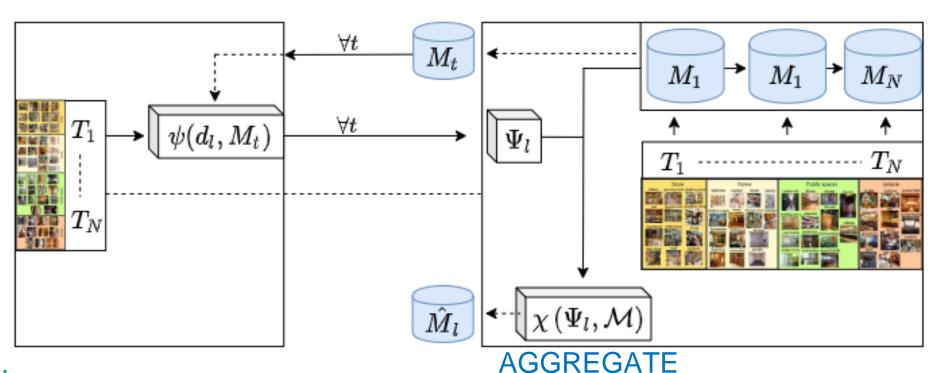




## (1) Serverside Adaptation

#### **USER**





### **SERVER**



- √ Scalable
- ✓ Unsupervised
- ✓ Privacy







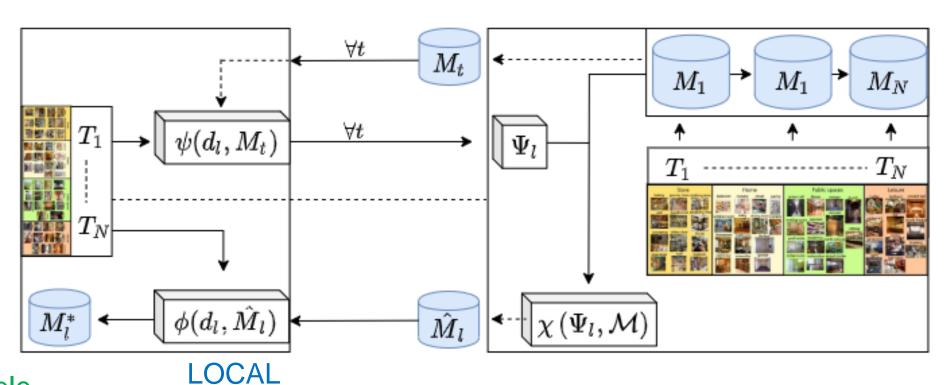




### (2) Local Adaptation

**USER** 





**SERVER** 



- √ Scalable
- ✓ Unsupervised
- ✓ Privacy
- √ 2 x Adaptation















# Code https://github.com/mattdl/DUA

## Questions? matthias.delange@kuleuven.be









