

# UNLABELLED DATASET

UKBIOBANK (100K participants, 700K person days)

MULTI-TASK  
SELF-SUPERVISED LEARNING  
(SSL) (Pre-training)

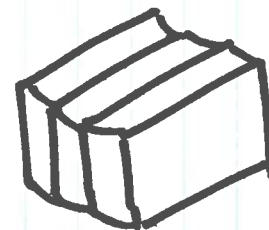
TriAxial  
Accelerometer DATA



GENERATE MULTI-TASK  
SELF-SUPERVISED  
SENSOR DATA  
+  
WEIGHTED SAMPLING

AUXILIARY  
TASKS  
FOR MTL  
(Transformations)

FEATURE  
EXTRACTOR



RESNET

SSL-Task  
specific  
Heads



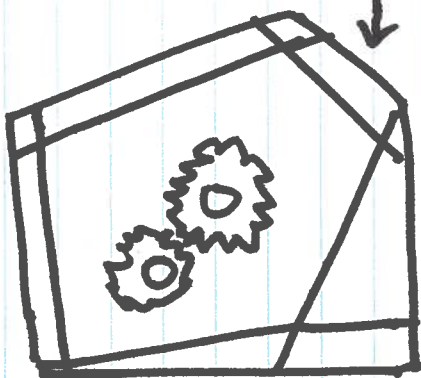
SSL  
Feature  
Vector

SMALLER LABELLED  
DATASET FOR FINETUNING

CAN

CANADIAN LABELLED  
TRIAXIAL WRIST WORN  
ACCELEROMETER DATA

DOWNSTREAM  
TRAINING



FINE-TUNING  
FOUNDATION  
MODEL

TRANSFERRED  
NETWORK



ACTIVITY  
CLASSIFICATION  
HEAD



PREDICTED  
ACTIVITY  
CLASSES