Gmail François Decarie <frank.decarie@gmail.com>

further clarification

2 messages

johnorange@sympatico.ca <johnorange@sympatico.ca> Fri, Feb 23, 2024 at 11:38 AM
To: charles.grant@cwgrant.ca, François Decarie <frank.decarie@gmail.com>

I am incorporating our discussions from yesterday and need to clarify a couple of points around generation of the global training data set and enrollment of the cohort of pigs.

1. The GTDS could be supplied as part of the system (i.e. you give access to the accumulated data). In this case the neural network could be trained before any cohort arrives.
2. Alternatively,, or additionally, the GTDS could be generated locally by weighing a subset of the new cohort and processing the image, manually if necessary until sufficient data points are obtained for the training to proceed automatically, and continues with weighing and image processing until the neural network is trained.
3. With a functional NN the cohort may be enrolled in the system. The pigs are imaged by the high res camera, the features of the fingerprint extracted and an ID established and stored in the ID data base.
4. At the same time, the image of the pig is processed to extract the mass related features and a dynamic reading of the mass is obtained from the load cell. These are fed to the NN for further training and added to the GTDS
5. Any subsequent assessment extracts the fingerprint, computes the ID and validates it from the ID database. The image is analysed (FIG 7) correlated wit hthe ID and added to the GTDS.

Can you confirm or correct my understanding. thanks

François Decarie <frank.decarie@gmail.com> Fri, Feb 23, 2024 at 1:14 PM
To: johnorange@sympatico.ca
Cc: charles.grant@cwgrant.ca

The Global Training Data Set (GTDS) is either supplied as part of the system, providing access to accumulated data, or generated locally. The local generation involves selective weighing and imaging of a portion of the new cohort, with manual intervention initially applied to collect a sufficient number of data points. This process transitions to automated training, continuing with cycles of weighing and imaging until the neural network (NN) is fully trained.

With the NN operational, the system proceeds to enroll the cohort. High-resolution cameras capture images of the pigs, extracting unique identifying features akin to fingerprints, which are then stored in the ID database.

In parallel, the imaging process extracts mass-related attributes from each pig, with dynamic weight measurements obtained from the load cell. These data streams, combining identification and mass metrics, are fed into the NN for further refinement and incorporated into the GTDS.

Further assessments retrieve the pig's fingerprint, compute the ID, and validate it against the existing records in the ID database. The analysis, as illustrated in Figure 7, correlates the pig's image with its ID, enhancing the GTDS with each evaluation.

[Quoted text hidden]