Irresponsible views on responsible AI development in livestock production.

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A camera shows a cow lying quietly in a barn. The software calls it rest. Is she comfortable, or is something wrong? That question brings together my two professional worlds: veterinary medicine and computer vision. It also explains why my research has moved from building algorithms to explaining what their results mean, and now to asking when and whether we should use them to make decisions.

My research began with cows, expanded to pigs and then poultry, and now includes horses among other species. Cameras remain central, alongside accelerometers for measuring movement, positioning devices and other sensors. In our work on estimating cow weight from photographs (PickAMoo), the appeal is practical: could a camera provide useful information without moving the animal onto a scale? In OinkScope, we count pigs in selected areas of a pen, with an interface designed for animal researchers. Both projects reflect my interest in making useful measurements more accessible.

These projects also keep me honest. A model may perform well because it has seen similar animals or backgrounds before. We need to test it on animals and farms it has never encountered. Counting pigs near a feeder does not prove that they are eating, let alone doing well. For me, research integrity means designing experiments that can challenge my assumptions and reporting clearly when the evidence falls short. Sometimes the most useful finding is that our method cannot yet answer the question.

I want farmers and animal researchers to use these tools without becoming programmers. Open software and clear methods let others check our work and build on it. Good documentation and affordable equipment help useful tools reach more farms. Farmers should also have a say in how their data are used. My interest in Green AI follows the same thinking: the benefit should justify the energy and hardware a system needs.

These concerns now take my research into e-governance, where digital information helps public bodies make decisions. A result used to support a farmer could also become evidence in an inspection or welfare assessment. Who checks whether it deserves that role? A prediction does not become more reliable just because it appears in an official report. Farmers must be able to understand and question an assessment, and the people making decisions must remain responsible for them. Explaining a model is one step; justifying the authority we give it is another.

My “irresponsible” view is that sometimes deciding against an impressive technology can be good science. I also want to be able to look a farmer in the eye and explain where those tools may let them down.

In this lecture, I will explore these questions through the story of my research journey since 2014. I will trace how my focus has grown from building algorithms to explaining what their results mean, and now to asking whether we can justify their role in decisions that affect animals and the people who care for them.