



David Brundage, Ph.D.

Assistant Professor

AI in Veterinary Medicine

Department of Surgical Sciences

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<https://www.brundagelab.org/>



Friday, October 2, 2026

12:00-1:00 pm – Morgridge Hall Seminar Room 7560

Zoom Meeting: 966 3372 9112

<https://uwmadison.zoom.us/j/96633729112?pwd=tHFc9i1dAAgmXe05uWtw8wXB1QZxGB.1>

Passcode: 621125

Veterinary Informatics: Out of Distribution by Default

Abstract: In veterinary medicine, almost every dataset is out of distribution relative to every other one. Species, clinics, laboratories, scanners, stains and report language all change from one dataset to the next, so distribution shift is the normal condition. Veterinary medicine lacks regulation for AI in the clinic, and often builds on existing human clinical AI. The Brundage Lab explores how models transfer across domains and the impact to the clinician. I will describe three lines of work. across 1,171 animal whole-slide images from 14 clades, pathology foundation models trained mostly on human tissue identify a slide's source dataset almost perfectly within a species, and species recall falls from 0.79 to 0.20 once whole sources are held out. open-weight language models running inside UW turn archived free-text pathology reports into labeled slide cohorts. Anatomic specimen availability constrains how we can provide educational access to students. We explore how Gaussian-splat capture can be leveraged for educating the future veterinarian.

Bio: David Brundage is Assistant Professor of Artificial Intelligence in the Department of Surgical Sciences at the UW–Madison School of Veterinary Medicine, which he joined in November 2025. He earned his PhD in Biomedical Informatics at Rutgers University, held computational pathology appointments at Weill Cornell Medicine and Dana-Farber Cancer Institute, and co-developed the open-source PathML toolkit. Before Wisconsin, he was Director of Informatics at Astrata, leading teams that applied NLP and large language models to clinical documents. His lab works on clinical image models across species, language models, 3D specimen capture and wildlife health surveillance with the Wisconsin Department of Natural Resources.



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