



R&D Leadership & Advisory for Robust & Defensible Medical Imaging AI

I provide strategic R&D leadership and counsel to medical imaging AI teams on defensible technical decision-making, from early problem framing to R&D validation.

My goal is to ensure that technical choices, data constraints, and evaluation strategies remain aligned with real-world clinical, operational, and regulatory requirements, leading to robust outcomes.



Technical Framing & Feasibility

Clarifying problem formulation, objectives & constraints before key decisions are locked in.



Data Due Diligence

Identifying structural risks in datasets – provenance, labeling, leakage, class balance – that may affect development, validation, or deployment.



Experiment & Evaluation Strategy

Structuring experiments & evaluation protocols to ensure results are interpretable, comparable & aligned with real-world use.



Literature Review & Analysis

Reviewing, selecting & justifying feasible & scalable methods aligned with project constraints & strategic objectives.



Technical Documentation

Documenting technical work for traceability and defensibility over time, including for regulatory and audit requirements.



Expert Session

Diving into specific technical issues you are facing – answering questions or reviewing targeted documents.



How I engage

Engagements are scoped to project and team needs, designed to adapt to project maturity and internal R&D structures. I offer three primary modes of collaboration:

1. **Ongoing R&D Advisory** A continuous strategic partnership (retainer-based) to ensure technical integrity, robust validation, and long-term defensibility of your projects.
2. **Focused Technical Interventions** For specific, punctual needs, I provide high-impact formats to unblock R&D stages or secure critical milestones.
3. **AI Leadership Roles** For teams that need senior technical direction, I take on leadership roles (Head of AI / CSO), leading their technical strategy directly.

What This Enables

- Clearer technical positioning
- Stronger evaluation rigor
- Reduced hidden downstream risk
- Defensible performance claims
- Continuity of judgment over time

Case Studies

- Real-world application of the VeraDP Data Due Diligence Protocol on a large public chest X-ray dataset, demonstrating how data due diligence, evaluation design, and technical strategy combine to surface hidden risks before model development.
- Metadata traceability assessment for GammaMetric (USA) as part of a research project on CT image-based reconstruction classification: evaluating the reliability of reconstruction metadata as ground truth.

About Vera Damerjian Pieters, PhD

PhD in Computer Vision

10+ years in applied MedTech R&D

Experience at the intersection of research design, data constraints, and real-world implementation



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