Jeremy HARDY

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Education

University of Sydney | 84 WAM Expected Graduation - Dec 2026

B.Eng Honours, Biomedical Engineering (Biocomputation)

Experience

GameSet Jun 2026 - Present

Founder & ML Engineer

- Founded and solely built a platform that turns one phone recording of an amateur volleyball match into per-player stats, highlights and replays, with no sensors or manual tagging. Live since Sep 2026, with 12 clubs and 50+ matches processed.
- Designed a multi-stage computer vision pipeline spanning multi-object tracking with re-identification, single-camera 3D court calibration, jersey-number OCR with a vision-language model fallback, and pose-based action attribution. A full match processes in under 30 minutes for A$2-3 of GPU time.
- Raised player re-ID accuracy from 0.76 to 0.95 IDF1 with jersey reading, and from 0.74 to 0.90 without it, by fusing pose, court-geometry, rotation and appearance evidence as calibrated likelihood ratios.

Telemattica Mar 2026 - Sep 2026

Machine Learning Engineer

- Sole engineer on a thermal computer vision system that detects overheating faults in overhead rail wiring. Took it from raw footage to production for 2 clients across 3,000+ km of line.
- Built a 25,000+ frame thermal dataset and trained RF-DETR, SegFormer and YOLO models on it.
- Traced an apparent 2 °C detection floor to 8-bit quantisation in the video transport rather than sensor noise. Fixed the encoding pipeline instead of scaling up the model, lowering the minimum detectable temperature rise to 0.5 °C.
- Deployed to edge devices and AWS SageMaker with ONNX export, behind a versioned model registry that enforces train/serve consistency.

University of Sydney Jun 2024 - Jul 2024

ML Engineer Intern

- Developed 3D UNet and YOLO-based deep learning models for segmentation, detection, and classification of aneurysms and stenosis in volumetric MRI data, achieving 78% mean IoU on test data.

RiskFlo Jan 2022 - Jan 2024

Business Consultant and Software QA Tester

- Analysed compliance data and built Tableau reporting that the C-suite used to drive business decisions.

Notable Projects

Deep Learning Analysis of Protein Aggregation Feb 2025 - Nov 2025

Analysis of protein aggregation for Honours Thesis

- Designed an automated data-mining pipeline combining computer vision, OCR and LLM workflows to curate a protein aggregation kinetics database of 10,000+ instances from PubMed.

Automatic Plot Digitisation System Oct 2025 - Dec 2025

Production-grade, fully automated plot-to-CSV extraction tool

- Built a web application that converts plot images into CSV data with zero user input, using custom deep learning models (YOLO detection, DETR-style coordinate prediction) served on AWS SageMaker.

Technical Skills

Languages: Python, SQL, TypeScript, JavaScript, C++, MATLAB
ML & Computer Vision: PyTorch, Scikit-learn, XGBoost, Detection, Segmentation, Multi-Object Tracking
Experimentation & Deployment: Hydra, Weights & Biases, AWS SageMaker, Docker, ONNX, FastAPI
LLM Engineering: OpenAI & Anthropic APIs, VLMs, Structured Outputs, RAG, LLM Evaluation