ADAM FIELD

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Computer vision systems engineer building end-to-end ML pipelines for high-stakes clinical environments. Combines domain knowledge in medical imaging and edge-deployed inference with a product-oriented mindset to translate stakeholder needs into scalable technical solutions.

EXPERIENCE

Thalasso Therapeutics — *Founding AI Engineer* Jun 2025 – Present

- Architected a multi-stage synthetic data pipeline pairing digitally reconstructed radiographs with 3D anatomical models, modeling camera position and magnification distortion to achieve geometrically accurate projections
- Designed a balancing strategy to ensure dataset representativeness across anatomical classes and X-ray imaging parameters, enabling robust model generalization
- Designed and implemented a novel upsampling algorithm to generate high-resolution DRRs from low-resolution CT volumes, improving synthetic image fidelity to narrow the synthetic-to-real domain gap and strengthen downstream model transfer to clinical data
- Developed a real-time image generation model for surgical edge devices using cGANs, multi-task learning, and domain adaptation, achieving **1.3s inference on 512×512 images at 24.96 dB PSNR**
- Engineered an interoperability pipeline using ML to ensure consistent image interpretation across heterogeneous medical hardware
- Diagnosed device-specific incompatibilities by mapping clinician workflows against software feature sets
- Implemented an asynchronous backend with shared-memory architecture for real-time image acquisition
- Evaluated cloud architectures on AWS and GCE for scalable model serving; provided data-driven recommendation that informed product strategy
- Contributed to market research and user needs analysis, consistently grounding feature development in expected clinical workflows and end-user requirements
- Ensured ML development and QA conform to FDA regulatory guidance for medical device software

Rose-Hulman Ventures — *Machine Learning Intern* Apr 2024 – Aug 2024

- Developed generative AI pipeline for 3D spinal reconstruction from sparse data; **improved segmentation accuracy by 160%**
- Solved a novel spatial alignment problem for positioning anatomical structures via a multi-step pipeline, which removed the need for a costly machine learning-based solution
- Directed frequent client meetings to review solutions, gather feedback, and align technical deliverables with stakeholder expectations

EDUCATION

Rose-Hulman Institute of Technology, Terre Haute, IN May 2025

Bachelor of Science, Computer Science | Minor in Entrepreneurship | Merit Scholar | **GPA: 3.9**
Activities: Football – Team Captain, Phi Gamma Delta Fraternity, Campus tutor

RESEARCH

Epistemic Uncertainty Estimation in Vision-Language Models Sep 2024 – May 2025

- Designed a novel vision-based algorithm to quantify epistemic uncertainty in VLMs, revealing a correlation between model consistency and systematic information removal
- **Awarded best presentation** by the Rose-Hulman Computer Science & Software Engineering department

TECHNICAL PROFICIENCIES

Languages: Python, C, Java, SQL
ML & Vision: PyTorch, MLflow, OpenCV, GANs, ViTs, VLMs, domain adaptation, multi-task learning, DICOM/NIfTI
Infrastructure: Linux, AWS (EC2, S3), Google Compute Engine, BentoML, shared-memory IPC, async backends