

Denny Schaedig

Machine Learning Engineer

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SUMMARY

ML engineer who ships ML systems end to end, from data pipelines and distributed training to packaging and serving. Published researcher experienced in generative models, LLM agents, rigorous evaluation, and HIPAA-compliant cloud and GPU infrastructure.

SKILLS

Languages: Python, SQL, TypeScript / JavaScript, Dart, Bash

ML & LLMs: PyTorch, TensorFlow / Keras, Hugging Face Transformers, scikit-learn; GANs, diffusion, transformers, computer vision, multimodal fusion; LLM agents, RAG, LLM evaluation

Deployment & MLOps: AWS (HIPAA HPC), Docker, Ray, CUDA, Prometheus, FastAPI, TensorFlow Lite, Hugging Face Hub, PyPI, GitHub Actions; fMRI / fNIRS data

PROJECTS

- **Maxim** - Open-source LLM agent harness (pymaxim) with pre-registered, ablation-controlled evals, nulls included; a taught want transferred between agents (0.84 vs. 0.22, n = 50 per arm). pymaxim.bio

EXPERIENCE

Laboratory for Child Brain Development — Washington University in St. Louis

St. Louis, MO

NeuroImaging Engineer (Machine Learning & Software Engineering)

Dec 2022 – Present

- Architected a HIPAA-compliant AWS HPC environment (EC2, EFS, S3, Glacier) ~32% under projected cost and secured an additional 24% university-wide cloud discount.
- Designed and shipped **HRfunc**, an open-source Python package for signal deconvolution; published in Neurophotonics (2025), with 22 public releases and ~14K PyPI downloads.
- Trained NIRSgen, a diffusion model for biomedical time-series augmentation (transfer learning lifted downstream accuracy from 76% to 92%).
- Developing **synchronAI**, a multimodal model fusing video, audio, and time-series signals (0.72 AUC).

Rocky Mountain Digerati, LLC

Summit County, CO

Founder & ML Engineer (independent applied-ML lab)

Nov 2025 – Present

- Built an LLM analyst agent for a healthcare-finance contract client, including a hallucination detection and removal layer, running on open-weight models as small as 16B parameters (in client beta).
- Run a self-hosted 3-GPU Ray cluster (CUDA and Apple Silicon, Tailscale mesh) for training, evaluation, and serving.
- Collected a 4,040-sample snowpack dataset (40K+ Hugging Face downloads) and pre-trained snowGAN on it; built AvAI, a Flutter check-out safety app for iOS/Android (launching fall 2026), with a Prometheus-monitored backend.

The Pain Lab — University of Colorado Boulder

Boulder, CO

Software / ML Engineer

Jul 2020 – Feb 2023

- Trained an RNN to predict pain from wearable-sensor and questionnaire data (79% vs. 63% baseline).

Intermountain Neuroimaging Consortium — University of Colorado Boulder

Boulder, CO

Software Engineer

Jul 2017 – Feb 2022

- Built ETL pipelines and automation for MRI scheduling, study enrollment, and training compliance.

SELECTED PUBLICATIONS (5 total: dennyschaedig.com/papers)

Schaedig, D., et al. *HRfunc: A tool for modeling hemodynamic response variability in fNIRS*. Neurophotonics (2025). doi.org/10.1117/1.NPh.13.S1.S17801

Graff, K., Zhang, Y., **Schaedig, D.**, et al. *Stability of the functional connectome across childhood*. Neurolmage (2026). doi.org/10.1016/j.neuroimage.2026.122246

EDUCATION

M.S., Artificial Intelligence & Machine Learning - Colorado State University Global

2025

B.A., Neuroscience - University of Colorado Boulder

2019