

# Mark Shteyn

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## EDUCATION

### Case Western Reserve University

*Bachelor of Science and Engineering in Data Science and Mathematics, Minor in AI*

**Aug. 2023 – May 2027**

Cleveland, OH

## EXPERIENCE

### Machine Learning Researcher

*Center of Excellence for Materials Data Science (MDS<sup>3</sup>), SDLE Research Center*

**Sep 2024 – Present**

Cleveland, OH

- Researched methods for laser powder bed additive manufacturing using Spatio-Temporal Graph Neural Networks.
- Developed image segmentation models for a scalable library on materials data to enhance analysis and processing efficiency.
- Built and trained a cGAN model to generate synthetic images for datasets with limited samples.

### Head of IT

*AI in Medicine & ELEOS*

**Jun 2025 – Present**

Cleveland, OH

- Built and manage AIIM's website (an AAMC-recommended nonprofit organization), hosting 500+ student-written summaries as a database delivering accessible medical AI research summaries for physicians and academic institutions.
- Designed and maintain publication pipelines enabling writers to review and publish medical AI summaries seamlessly.

### Machine Learning Intern

*EPIC Insurance Brokers & Consultants*

**Jun – Aug 2022 / 2023 / 2024**

Jersey City, NJ

- Built an internal LLM chatbot for policy/procedure Q&A; benchmarked chunking strategies (fixed, recursive, semantic) with varied sizes/overlap to improve retrieval accuracy and latency.
- Solo developed a web-based tool for multiple sister companies to automate record-matching using embeddings and LLMs.

## PROJECTS

- **orca** (Jul 2025 – Present): LLM-driven machine learning automation that turns a dataset + problem statement into a working pipeline. It generates, runs, and evaluates code inside a sandboxed Docker container and iteratively optimizes models using an evolutionary hyperparameter search before exporting reproducible notebooks/scripts and a metrics report.
- **anyvec** (Mar 2024 – May 2024): Open-source package to vectorize text, images, video, audio; Dockerized client-server with modality-specific preprocessing (CLIP + Tesseract + Whisper); integrates with Weaviate/FAISS for cross-modal search, achieving 300+ weekly downloads at launch.
- **campusreach** (Aug 2025 - Present): Student-centered volunteering hub for CWRU, connecting students with local nonprofits through a centralized platform. Features include SSO authentication, searchable volunteer directory, QR-based hour verification, reward system (Case Cash/credit), community feed, and scalability to other universities

## ACTIVITIES

### 6x Hackathon Winner

**Feb 2024 – Present**

- 2nd/500+ at Meta Llama3 Hackathon; 1st/50+ at CWRU DataFest 2024; 3rd/170+ at HackCWRU 2024; 3rd/100+ at Kent State Hackathon; 5th/250+ at Supabase x Build Club Hackathon; 2x Finalist at Morgenthaler-Pavey Startup Competition.

### HackCWRU Co-President

**Oct 2024 – Present**

- Raised \$13K+ in prizes; built website and handled mailing operations; hosted 150+ participants. Led hackathon design, coordinated a panel of judges, and mentored teams through their projects.

### Head TA, National Student Leadership Conference

**Jun 2025 – Aug 2025**

- Mentored 150+ high school students at UC Berkeley and Duke University in Python, ML, computer vision, and LLMs, designing beginner-friendly Jupyter notebooks, project rubrics, and guiding teams from ideation to demo-ready capstones.

### Team Lead, Data Science Challenge at LLNL

**Jul 2024 – Aug 2024**

- Developed algorithms for high-resolution electro-anatomical mapping of cardiac activity by integrating multi-modal 12-lead ECG data with ML, while guiding 4 students and teaching deep learning basics.

### Neurotechnology Club Founding Executive (Neurex)

**Aug 2024 – Present**

- Taught 50+ members; built [website](#); authored a deep learning curriculum; hosting weekly office hours; leading an EEG-to-image reconstruction project.

### xLab Engineer for Weatherhead School of Management

**Sep 2025 – Dec 2025**

- Developing an MVP design for a tool that measures and benchmarks corporate AI adoption and maturity for competitor analysis for the Weatherhead School of Management.

## TECHNICAL SKILLS

**Languages:** Python, Go, Rust, Java, SQL, JavaScript/TypeScript, HTML, CSS, R

**Frameworks:** React/Next, Node/Express, Flask/FastAPI, PostgreSQL, Prisma, Docker, OAuth2, Tensorflow/Pytorch, AWS/GCP