

Davi Klitz

davi.klitz@columbia.edu | github.com/OkayCombo66

EDUCATION

Columbia University

B.S. in Applied Mathematics, Pre-Medical Track

New York City, NY

Aug. 2025 – May 2029

École Internationale Le Verseau

High School Diploma, Advanced Sciences and Mathematics

Wavre, Belgium

Aug. 2019 – May 2025

EXPERIENCE

Co-Founder & Chief Technology Officer

Specht Labs

Aug. 2026 – Present

New York, NY

- Building the first Large Algorithmic Model (LAM).
- Lead the core algorithmic work and engine. Proof of concept is bioprocessing and biomanufacturing.
- Have pilots with 10 premier research groups (Harvard, USC, Cornell,...).

Machine Learning Researcher

Icahn School of Medicine at Mount Sinai, Goate Lab

Sep. 2026 – Present

New York, NY

- Research under PI Alison M. Goate.

Machine Learning Researcher

Columbia University Irving Medical Center, Laboratory of AI & Biomedical Science (PI: Junhao Wen)

Sep. 2025 – Sep. 2026

New York, NY

- Modeled Alzheimer's disease heterogeneity from structural MRI and genetic data; developed a diffusion-based generative model to replace the lab's GAN backbone for subtype discovery.

Co-Founder, Head of Technology & Marketing

FlyHigh Enterprise

Aug. 2023 – Jul. 2025

Brussels, Belgium

- Co-founded a brand repurposing decommissioned hot-air-balloon fabric into consumer goods; built the storefront and ran acquisition. \$13,000+ revenue, national media coverage, 2nd of 475 teams in a national entrepreneurship competition.

PROJECTS

ClearChart | *FastAPI, React, LLM APIs, prompt evaluation*

2026 – Present

- Rewrites discharge summaries, lab panels and radiology reports at a chosen reading level; a verification pass extracts every numeric value, unit and reference range from the output and checks it against the source document before anything is shown.

Retinal Age Clock (CUIMC) | *Python, OCT, image segmentation, regularized regression*

2025

- Predicts biological age from retinal OCT: layer-thickness and microstructural biomarkers extracted per scan, regressed against chronological age; the residual ("age gap") is the candidate biomarker.

CNN for Brain-Tumor Detection on MRI | *PyTorch, ResNet-18, AdamW*

2025

- Fine-tuned ResNet-18 on MRI slices with augmentation, intensity normalization and weight decay; 96% held-out accuracy for tumor presence.

ASD Screening Classifier | *scikit-learn, pandas, NumPy*

2024 – 2025

- Classifier for Autism Spectrum Disorder from standardized questionnaire responses; feature selection, hyperparameter search and stratified cross-validation, with item interpretation reviewed by a speech-language pathologist.

TECHNICAL SKILLS

Languages: Python, Julia, C++, Java, SQL, JavaScript, $\text{\LaTeX}$

Scientific & symbolic: SymPy, NumPy, SciPy, pandas, Z3 (SMT), CVXPY (SDP), FLINT, StructuralIdentifiability.jl

ML: PyTorch, scikit-learn, Hugging Face Transformers, diffusion models, GANs, OpenCV

Systems & tooling: Git, Docker, Linux, Google Cloud Platform, FastAPI, Flask, React, Node.js, autonomous coding-agent orchestration