FELIPE MAUTNER

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EDUCATION

Carnegie Mellon University, Dean's List Fall 21, Fall 23, Fall 24
B.S. in Computer Science, Machine Learning Concentration and Mathematics Minor.   May 2025

SKILLS

Languages	Native proficiency in Portuguese and English
Programming Languages	Python, C++, C, CUDA, Java, Julia, SML, LaTeX
Libraries	NumPy, PyTorch, TensorFlow, OpenCV, scikit-learn, pandas, Matplotlib, spaCy

RELEVANT COURSEWORK

Generative AI, Deep Reinforcement Learning, Computer Vision, Machine Learning for Large Datasets, Computational Photography, Parallel and Sequential Data Structures and Algorithms, Parallel Computer Architecture and Programming, Probability and Computing.

WORK HISTORY

Computer Vision Software Engineering Intern Kooick AI   May 2024 - August 2024

- Developed positioning system for products inside the company's smart cabinet product. Used classic vision and SOTA AI to derive the location of items, enabling more robust classification results through a multiple view system. Developed in Python and integrated across teams.

TA for 16-385: Computer Vision Carnegie Mellon University   Spring and Fall 2024

- Helped first time Computer Vision students through one-on-one assistance on conceptual and programming questions ranging from image pre-processing to deep learning and object tracking in videos with optical flow.

TA for 21-241: Linear Algebra Carnegie Mellon University   Fall 2022

- Led a recitation group of approx. 25 students through their introductory Linear Algebra course. Worked with other TAs and instructor to improve the course and produced additional material to aid my students.

Software Engineering Intern Hospital Israelita Albert Einstein   June 2022 - August 2022

- Worked as a Full Stack engineer implementing an internal dashboard for hospital's datalake using the Django python framework. Resulting portal used to enhance scientific production by connecting researchers and facilitating access and sharing.

Data Science Intern Hospital Israelita Albert Einstein   August 2020 - December 2020

- Worked on predicting when to schedule urgent cholecystectomies based on radiology reports. Anonymized and pre-processed data to create new medical training corpus in Portuguese. Developed and deployed NLP model using spaCy's pipeline.

PROJECTS

Weights2Weights++ (project page)

- Constructed nonlinear subspace of Diffusion Model LoRA parameters with a VAE.
- Implemented downstream tasks done in original Weights2Weights paper.

Deconvolution for Broken Phone Cameras (project page)

- Implemented four deconvolution approaches for reducing effect of broken phone lens blur on images using spatially-varying PSFs. Used ADMM and Douglas-Rachford optimization algorithms.