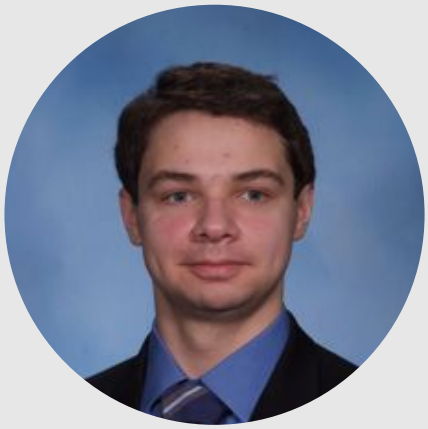

Edward Finkelstein

Student

6 May 1999

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Linkedin Profile

edfink234@gmail.com

Coding Portfolio

Wyzant Tutoring Profile

Github Profile

Research Reports/Theses

Licenses & certifications

Personal Website

Technical Skills

C/C++/C#
Python/Numpy/Pandas/Julia
Matplotlib/seaborn/sklearn
TensorFlow/PyTorch/PySR
CERN-ROOT/Eigen/Armadillo
Fortran/Gnuplot
Mathematica/MATLAB
LaTeX/TikZ
KiCad/LTSpice
Vi/Emacs/Unix/Linux
Mac OS/Windows
HTML/CSS/JavaScript/PHP
SML/OpenMP/MPI/CUDA

Language Skills

English (Native)
Dutch (Basic)
German (Basic)
Danish (Basic)

Education

PhD Computational Science — Aug. 2024 - Present
San Diego State University and University of California, Irvine
GPA: 3.89/4.00 (33 graded units)

Master of Science in Physics & Minor in Machine Learning — Oct. 2021 - July 2023
Johannes Gutenberg University of Mainz
German GPA: 1.4 (Magna Cum Laude & Excellence Track Physics)

Bachelor of Science in Physics — Sept. 2017 - May 2021
Stony Brook University
GPA: 3.76/4.00 (Magna Cum Laude & Honors in Physics)

Awards

SIAM Gene Golub Summer School 2025 — April 2025
DOD SMART Scholar Award — April 2024 - Present
JGU Mainz Excellence Track Certificate — July 2023
JGU Mainz Excellence Track Scholarship Award — Oct. 2021 - July 2023
NYS STEM Incentive Program Scholarship Award — Sept. 2017 - May 2021
Stony Brook Presidential Scholarship — Sept. 2017 - May 2021
AP Scholar with Distinction — May 2017

Research Experience

Graduate Research, UCI — Sep. 2025 - Present

Designing and evaluating symbolic regression frameworks for learning interpretable models of particle track data under complexity constraints. Reference: Prof. Daniel Whiteson daniel@uci.edu.

NRL DC 2025 Internship — June. 2024 - Sep 2025

Research on physics-informed symbolic regression for bright soliton dynamics in strongly magnetized plasmas. References: Dr. David Bergman, david.r.bergman3.civ@us.navy.mil, Thomas Pizzillo thomas.j.pizzillo.civ@us.navy.mil

From Particles to Waves: Optimal Control in Nonlinear Systems — Aug. 2024 - June 2025

Learning optimal control methods for point-particles and their quantum realizations in confining potential-energy landscapes. TA for Calc 1 & 3. References: Prof. Ricardo Carretero, rcarretero@sdsu.edu, Prof. Filippo Capolino f.capolino@uci.edu

ALPS Project - AI-based Learning for Physical Simulation — Aug. 2023 - Jan 2024

Research project: Discover *interpretable* physical models and employ novel symbolic regression methods, here. TA'd for the course "Statics and Strength of Materials." References: Prof. Lucantonio, a.lucantonio@mpe.au.dk, Prof. Andriollo titoan@mpe.au.dk

Master-Thesis - Search for Axion-like particle in exotic decays of the Higgs boson with the final states of $ll\gamma\gamma$ — Oct. 2022 - July 2023

Search for $H \rightarrow Za$ decay as external ATLAS/CERN member. Perform selection cuts on data. Rewrote analysis software in C++, here and improved ROOT RDataFrame implementations in Python and C++. Merged ROOT CERN pull-requests here. References: Prof. Schott, Matthias.Schott@cern.ch, Dr. Naumann axel.naumann@cern.ch

Research - Dijet Resonance Search with Isolated Leptons in ATLAS 13 TeV Data — May 2020 - Oct. 2021

Analysis & simulate data as external ATLAS/CERN member. Fit empirical functions to particle event data. Performed signal injections to model statistical fluctuations and search for BSM physics. Reference: Prof. Tsybychev, dmitri.tsybychev@stonybrook.edu

Work Experience

AI Trainer — May 2024 - Present

Rate, critique, and improve chat-bot responses on Outlier.

Django Web Developer Quantum Computing — Nov. 2022 - July 2023

Converted the GUI (graphical user interface) for the quantum computer at JGU Mainz to a responsive website using Django, here. Reference: Maximilian Orth, morth@uni-mainz.de

LaTeX and TikZ Typesetter — Feb. 2022 - Nov. 2022

Typeset hand-written notes and drawn figures for a particle detector's course at JGU Mainz in LaTeX and TikZ, here. Reference: Dr. Ulrich Müller, ulm@uni-mainz.de

Wyzant Tutor — March 2021 - Present

Tutor undergraduate STEM students (C/C++, Python, physics, calculus, differential equations) here.