Gordon Kamer
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Education

HARVARD UNIVERSITY Cambridge, MA
A.B. degree candidate in Computer Science. GPA: 3.98. May 2023
Relevant Coursework: Artificial Intelligence, Systems, Algorithms, Real Analysis, Linear Algebra, Statistics

BRUNSWICK SCHOOL Greenwich, CT
Valedictorian. Senior Prefect. Class Senator. GPA: 100.96 May 2018
Other Awards: Computer Science Book Award, History Prize, Kulukundis Cup (top GPA senior class), Harvard Book Award (top GPA junior class), Columbia Book Award (top GPA sophomore class)

Experience

VIRTU FINANCIAL Chicago, IL
Quantitative Trader Intern June 2022 – August 2022
Learned about market structure and quantitative strategies in equities trading. Performed statistical analysis on returns using Pandas with access to a SQL database.

LONG-TERM STRATEGY GROUP Cambridge, MA
Fall Research Intern September 2020 – December 2020
Researched national security issues for the Department of Defense, combining political and technical insights on AI. Presented to Pentagon officials summarizing findings including data collected and analyzed in Python.

Projects

SENIOR THESIS IN AI September 2022 – March 2023
Designed and implemented a markup language for neural network architectures. Allows users to name parameters, organize the computational graph into blocks, embed initialization rules in the model description, and import their work into PyTorch and other frameworks. Trained a 125m parameter GPT-styled model built end-to-end from using the system. Also conducted experiments on using Transformers as auto-encoders to create embeddings that can be used as LLM context. Built a model zoo and documentation website at https://agrippa.build using React, SQL, and Flask.

LLAMA FINETUNING March 2023 – Present
Using low-rank adaptation and 8bit quantization to finetune LLaMA on a GPU cloud. The dataset is a modified version of Stanford's Alpaca along with new generated data designed to make the model less passive. I am also building out a simple, lightweight data-exploration tool for LLM finetuning using SQL, Flask, and Jinja.

DEFENSE RESEARCH June 2022 – August 2022
Contracted by the Office of Net Assessment to analyze the scientific literature on emerging nuclear capabilities and synthesize the research with political analysis provided by Professor Stephen Rosen.

Other projects: Traffic fatality study published in JAMA: Internal Medicine, Baseball simulation and predictive analytics in Python, and more available at gkamer8.github.io.
Skills: Python, PyTorch, C/C++, Linux/Unix, Pandas, SQL, R, System Verilog.
Other interests and experience: History of science and computing, Harvard Sports Analytics Collective, Harvard Club Hockey, New York Mets, Camp Laurel South chess and athletics (summer 2021).