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Summary

I'm currently combining different machine learning architectures, as appropriate, to deliver as much practical benefits to Internet users as possible while minimizing computational cost or algorithmic complexity on my end. My goal is to promote a healthier lifestyle for Internet users by automatically delivering insightful analysis and follow-up analysis on Internet content (web elements) that's loaded onto user browsers in real-time. I'm also analyzing, when users opt to share, browsing history to help users better manage their time.

The five main features I'm developing are 1) to deliver intelligent analysis and problem solving ability to user queries and real-time information loaded on their browser 2) to promote the use of free and reliable sources of information such as government websites, major newspapers, or reputable educational creators on YouTube 3) to help explain complex topics that may be loaded by their browser 4) to warn users of potentially deceptive, dangerous, or unproductive sites/content, and 5) to help users manage their time better by analyzing their browsing history/activity.

Many of the features I'm building rely on the use of OpenAI's API or plugin API to leverage their large language models, which I have had significant experience in using. I have a foundational understanding of their transformer-based NLP algorithm, but obviously it's not easy to replicate everything from scratch. The application I'm developing enhances traditional user experience of having to chat with GPT on chat.openai.com.

I'd be willing to share some closed-source code without any commitment required to any potential technical co-founders, investors, or employers. For everyone else, I've put much simpler versions of what I'm working on as technical demonstrations of the underlying technology on GitHub. More complex scripts on open repositories may not be appropriate since none of the code I uploaded are intended to be used as dependencies, but rather are algorithmically-efficient and updated (non-depreciated) demos for specific use cases that developers may alter for their own use cases.

I also have full-stack experience from previous projects and I'm continuing to refine/update my full-stack skills on the static non-ML algorithms that are required for my ML-focused application to be successfully deployed.

Experience

Full-Stack & Machine Learning Engineer

AI WebAssist Inc.

Apr 2023 - Present (2 months)

I am currently combining different machine learning architectures, such as transformers along with more generative-focused problem solving architectures, to deliver as much real-world performance practical usefulness for Internet users as possible while using as little computational resources and algorithmic complexity on my end. I've also combined convolutional networks for image/video intelligence as well as other forms of data when appropriate.

I'm very conscious to only use algorithmically efficient algorithms (within a small constant of the max-efficient, as far as I know) and to minimize the need for any computation or other costs on my end as

possible. I've had extensive first-hand experience on how expensive cloud and local hardware is, so have learned to always maximize revenue-to-cost ratio, rather than run anything inefficient or worse yet throw more threads at bad algorithms.

One way to achieve this is to use ChatGPI's API or plugin (I was invited as an early developer for plugins but haven't submitted it for review yet) to use their large language models to power some of my application features, without having to build everything from scratch. I believe Google recently made its Bard API available on GCP but I've only used OpenAI's API so far.

The goal of this application is to promote a healthier lifestyle for Internet users, such as by intelligently deliver useful analysis (and follow up queries/analysis) when appropriate, promote free and reliable content such as those found on government websites, major newspapers, and reputable educational creators on YouTube. I'm also developing features to warn users of potentially deceptive, dangerous, or unproductive (waste of their time) sites as well as analyze their browsing activity to promote better time management skills.

I wrote some brief initial design goals in April 2023 here https://www.healthiersearches.com but I don't really have the time to constantly update it to reflect any progress.

Information Technology Manager

Boston NutriCare Technology Inc.

Feb 2022 - Present (1 year 4 months)

Boston Nutricare, a cutting-edge nutritional science company, has successfully developed its premier nutritional supplement and meal replacement solution, specifically designed to assist individuals with diabetes in their recovery and reduce dependence on medications. This groundbreaking product was developed by a team of highly qualified scientists, each possessing a PhD in nutritional science or related field

Having secured over $1.5 million in seed funding, Boston Nutricare's innovative product has garnered positive feedback from both medical professionals specializing in diabetes care and patients affected by the condition. In 2023, the company experienced significant revenue growth, exceeding $10k per month.

In my multifaceted role at Boston Nutricare, I contributed to the company's success by overseeing information technology, business management, and operations. I also played a crucial part in the product's expansion to the US market by translating the Chinese product information into English and developing an engaging and accessible English-language website to facilitate customer discovery and purchase of our product.

Full Stack Software Engineer

AI4Humanity Inc.

Sep 2019 - Apr 2021 (1 year 8 months)

We developed an AI-driven application aimed at enhancing users' social connections while prioritizing privacy. Our innovative solution automates and streamlines the conventional trial-and-error method people typically employ to improve their social interactions. By leveraging machine learning algorithms, we efficiently match users within highly compatible subgroups.

Our robust front-end development utilizes Swift, Kotlin, JavaScript, HTML, Angular.js, and React.js, while the back-end and AI components are built with Python3, Django, TensorFlow, and Scikit-Learn. We ensured cross-platform compatibility by developing the code on MacOS, Windows, and Linux systems. To host the application, we employed Linux operating systems and harnessed the power of AWS cloud infrastructure.

Independent Developer (practice project)

Twitch

Oct 2018 - Feb 2019 (5 months)

In 2018-2019 Twitch allowed people with 1 API key to download every chat message sent on the platform ~entirely with no rate limits and in real time, so as a data science and ML noob I just did it. I know it sounds really dumb to download things before knowing what I want to do with it, but as a noob I guess I was just too naive in engineering best practices at the time. At that time I believed that even simple ML algorithms could deliver insights with enough data, but that's just not true. I built several simple functional apps that they presumably prefer and are complaint with ToS but it wasn't worth my continued investment.

Twitch has since changed their API features so you now have to do front-end or IRC scraping for Chat, which technically violates their ToS if you're a "user." But then again, while this technically not legal advice, non-users generally could front-end scrape without violating any laws whatsoever including civil; eg search engines do the same. In the USA you basically only may violate any laws whatsoever if you do any "damage." FYI many of their streamers do actually frequently violate laws, so it may not be worth your time to develop there.

- Created a side project (an "enhanced" search and recommendation engine of Twitch) to learn more about using big data and AI because all of the public data on Twitch was easily accessible through their API and other scraping tools (which did not violate their terms of service)
- Enhanced my skills in web automation, data scraping, artificial intelligence, Python, JavaScript, and C ++, AWS, Google Cloud Platform, and DigitalOcean
- Developed the code locally on MacOS, Windows 10/11, and Ubuntu then hosted the application on the cloud using Linux VMs
- Intended to create an enhanced/alternative search engine displaying the results of the intelligent ML analysis performed on individual videos and comments, but ran out of cloud budget to store and process all of the data required deliver an MVP

Information Technology Consultant

ONE Consulting Services (HK) Limited

Dec 2014 - Feb 2015 (3 months)

http://www.one-consulting.net/

- Helped build a Netsuite Customer Relationship Management software for one of Apple's major suppliers in Hong Kong
- Used JavaScript to build Netsuite front end and back end software
- Used the Dropbox API to handle volumetric customer data

Product Manager, Events Database

Kensho Technologies

Sep 2013 - Jun 2014 (10 months)
https://www.kensho.com

- As one of the first 10 employees, helped grow a company that sold to S&P Global for $500M (or $700MM depending on the source) in 2018.
- Managed the creation and build-out of an "Events Database" of real world events that was used to predict capital market movements
- Used Python3 for back end engineering and JavaScript/html for front end
- Negotiated with data vendors and integrated the third party APIs with Kensho's system
- Scraped free data sources with Python
- Successfully built out a high quality database that led to a successful Series A fundraising in 2014

Investment Banking Analyst
SHANGHAI PUJI GROUP LIMITED
Feb 2011 - Apr 2012 (1 year 3 months)
https://www.pujicn.com/#bridging-east-and-west

- Successfully assisted in building an investment product for wealthy Chinese investors to invest in real estate development in Hawaii in exchange for fast-tracked green cards
- Built pitch books and marketing material with Microsoft Powerpoint
- Created financial analysis models using Discounted Cashflow Analysis using Microsoft Excel
- Facilitated communication between investment partners in Chinese (Mandarin) and English

Education

Harvard University
Data Science Graduate Certificate, Computer Science
May 2023 - Dec 2023
I plan on completing all 4 of the graded courses required (2 in the Summer and 2 in the Fall) to complete a Data Science Graduate Certificate from the Harvard Extension School. I already have experience in most of the material, as well as literally completed one course already (CS109x as part of the Professional Certificate in Computer Science for Python Programming), so I expect to be able to do well in these 4 courses with a relatively low part-time commitment. For the 2 electives, I plan on taking maximally challenging courses in deep learning

Tufts University
Bachelors of Science, Engineering Science
Sep 2006 - Jun 2010
I had undiagnosed ADHD and ASD, which along with causing some other psychological symptoms, caused me to always try to take the shortest way out from elementary school to high school. The undiagnosed ADHD really made more advanced classes in engineering at Tufts difficult, but I still managed to graduate a BS with honors.

I may return to Tufts to study an MSCS because I really enjoyed my time there as an undergrad and because they offer a 20% scholarship for returning alumni. Tufts recently introduced an online MSCS

program (same admissions and requirements as on-campus, with the option to switch to on-campus) and being able to obtain the degree online is really convenient for me at this stage in life.

Harvard University

Professional Certificate in Learning Python for Data Science, Computer Science

Sep 2022 - May 2023

Completed 3 high quality and relevant pass/fail courses required to earn a Professional Certificate in Learning Python for Data Science.

The classes are:
CS50P, Introduction to Programming with Python
CS109, Data Science
FC1, Fat Chance: Probability from the Ground Up

Harvard University

Professional Certificate in Computer Science for Artificial Intelligence, Computer Science

Jan 2023 - Dec 2023

There are two pass/fail classes that need to be completed in order to obtain this Certificate.

Technically I already completed the first course, CS50, in person, while graded, several years ago when I was studying on-campus. But since this Certificate requires another completion of CS50 and since I'm a bit rusty with C anyways, I'll probably spend a few hours to go through the course a second time.

For the course I'm more interested in, CS50's Introduction to Artificial Intelligence with Python, I plan learn machine learning best practices first then go far beyond the simple requirements of the class projects so I could display my accomplishments publicly on Github. I'm about half way through as of May 2023.

Udacity

Various Nanodegrees, Computer Science

Jan 2022 - Jun 2023

I could be going 10x faster just to get Nanodegrees accomplished, but I have other things to do with my time and I also want to be able to display maximal quality of code, so I could display the code as samples on Github which is allowed by Udacity.

Boston Latin School

High School Diploma

Sep 2002 - Jun 2006

BLS is the most competitive magnet high school in the state of Massachusetts. While I was there the median/mean SAT score was around 2150/2400 and roughly 10% of my class of 2006 decided to enroll in Harvard College as undergraduates. I scored in the 99th percentile on the entry exam and excelled in some topics such as honors/AP math and physics, but the undiagnosed ADHD made it difficult to do well in every class.

UNSW

Master of Science - MS, Computer Science

Jan 2015 - Dec 2015

Unfortunately after struggling but barely passing my first semester, I had to drop out during my 2nd due to lifelong undiagnosed ADHD and ASD, which caused a Anxiety/Panic Disorder and Depression after being untreated for so long in my life.

After returning to the US from Australia, I underwent a comprehensive neuropsychological evaluation to determine what was causing my symptoms. Since treatment began my performance has gone up considerably, allowing me to continue my dreams of becoming a successful computer scientist with a focus on ML and full-stack eng.

Licenses & Certifications

Problem Solving (Basic) - HackerRank

A2C38046728

Python (Basic) Certificate - HackerRank

5ABE988B62C5

Problem Solving (Intermediate) Certificate - HackerRank

846775504577

JavaScript (Basic) Certificate - HackerRank

6203717CBF60

Go (Basic) Certificate - HackerRank

28774B35210B

Node (Basic) Certificate - HackerRank

6339D3768959

Skills

Python (Programming Language) • Machine Learning • Django • JavaScript • Amazon Web Services (AWS) • TensorFlow • Data Mining • Docker • Kubernetes • Full-Stack Development