

Abhinav Patel

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A computer scientist

I am Abhinav Patel, a 4+ year experienced self taught computer scientist and machine learning researcher specializing in solving challenging problems. With expertise in C++, C, JavaScript, Rust, and Assembly, I explored computer architecture, leveraging mathematics to create programming magic. My passion for programming, combined with a deep interest in Physics, Maths, and Computer Science, drives me to constantly learn, research, and contribute to cutting-edge developments. I am also authoring a book on MACHINE LEARNING algorithms . I am a fast learner and thrive on solving challenging problems and stay updated with the latest research in my field. While I am mostly self taught I know most of the graduate maths that helps me to design optimal algorithms for problems i want to be computer scientist. i am eager to collaborate with interesting project and help others with my skills. i have also experience as web developer experience with web dv ecosystem html css js ts, next js and apis and other related stuff and making interesting projects that sparks joy

Projects

- **integralbook**
basic to advance integration and sums techniques helpful to machine learning engineers
- **Wavecraft**
A fully-fledged audio editor for quick and efficient music editing.
Developed to provide full control over audio editing tasks.
- **DRUMMY**
A fun tool for making beats, adding an element of enjoyment to music creation.
Inspired by the need for more lighthearted projects.
- **Waveshift**
An innovative web app designed to make sounds funny and funky.
It also serves as a visualization tool for noises and sounds.
- **FunArtWork**
A creative outlet for programming experiments and fun projects initiated during moments of boredom.
- **stable diffusion**
implementation of stable diffusion in pytorch by reading paper
- **Lollipop Language**
A Turing complete stack-based programming language supporting NASM and GAS assembler syntax.
Developed during a computer architecture course.
- **GPT transformer**
this is implementation of fullt fledged transformer based generative ai from scratch in rust ,i learned a lot while building this project ,i love reinventing the wheel
- **llama2**
llama2 implementation in pytorch from scratch by reading paper
- **MachineLearningInC**
Basic machine learning model written in C without external dependencies, based on Markov's chain.
Utilized for learning ML fundamentals.
- **Compiler**
An ongoing project focused on learning compilers.
Developing a compiler with a custom backend for educational purposes.
- **Lollipop Server**
A basic HTTP server in Zig.

- **Low-Level-Notes**
some notes
- **WEBserverinRUST**
Implementation of TCP in Rust, mainly for Linux.
- **Websites**
[CuriosFly](#), [Portfolio](#)
Designed and implemented various websites using React, Next.js ecosystem during the learning phase.
- **Future Projects**
Working on an AI-related project , trying to research new algorithms ,own operating system , a fully fledged programming language in my native language and developing an animation software for browsers, and exploring ideas that brings positive impact on the world.
- **Her dead voice**
i dont know if i have to mention here but i think it reflects a part of my life and thoughts , thats my book on social awareness , must check out

Skills

- **Math and algorithm:** my primary focus of research in solving complex problems in elegant way discover something new and always try to keep updated with research in machine learning and maths
- **Languages:** C++, C, JavaScript, Rust, Assembly, Python, HTML, CSS, Zig
- **General** understanding of computer architecture in depth , compiler development and language design
- **Web Development:** React.js, Next.js, Tailwind CSS, CSS,SQL AND DATABASE MANAGEMENT and several types of other emerging technologies and trends,
- **Machine Learning:** Deep understanding of ML algorithms, trying to do research that make a change in world
- **Certifications:** [Reporting Child Labor \(ITC\)](#), [Networking Basics Cisco](#)
- **Soft Skills:** Teamwork, Leadership, Communication, Research, Adaptability, Time Management, Problem Solving, Poem Writing, Book Writing

Contact

