

Vivek Kethineni

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Education

B.S. in Computer Science : University of Minnesota - Twin Cities

August 2022 — May 2026

GPA : 3.99 / 4.0

Skills and Technology

Proficient — Python, Rust, HTML

Familiar — Java, SQL, Tensorflow, PHP, JavaScript [Vanilla, jQuery, SvelteKit], Git, Linux, Backend Development

Beginner — C, C++ , Docker, MatLab

Projects

Extension for online forum

April 2022 — May 2022

- Used **JavaScript** to create a script that added the ability to block users on vlr.gg, a popular video game forum. ([link](#))
- Received dozens of downloads and eventually morphed into a larger, open-source chrome extension, BetterVLR.

LearnXOR

May 2023 – July 2023

- Created machine learning framework from scratch in **Rust**, implementing stochastic gradient descent using backpropagation. ([link](#))
- Used framework to create a educational web application in **Rust** using **WebAssembly** that helps users understand the impact of different model parameters on the ability of a model to learn the XOR gate. ([link](#))

PNG to JPEG converter

May 2023 — June 2023

- Developed command line tool to convert PNG images into JPEG/JFIF images. ([link](#))
- Implemented a DEFLATE decompressor, discrete cosine transform, and multiple types of Huffman coding schemes from scratch using **Rust**.

Webscraping

April 2023 – June 2023

- Created multiple web scraping tools in **Python** using **BeautifulSoup4**.
- Developed tool that finds whether an academic genealogical path to Euler exists for any mathematician listed on the Math Genealogy website using graph traversal algorithms ([link](#))
- Developed google colab notebook that scrapes the users with the highest number of posts on video game forum, vlr.gg. ([link](#))

Relevant Coursework

Taken : Discrete Structures (A), Linear Algebra (A), Multivariable Calculus (A), Introduction to Data Structures and Algorithms (A)

Plan to take before May 2024 : Natural Language Processing, Machine Architecture, Introduction to Artificial Intelligence, Introduction to Operating Systems