

Sidh Suchdev

Software Engineer

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Education

Aug 2021- Present **University of Texas at Austin** Austin, TX

- Bachelor of Science in Computer Science with a GPA of 3.76
- Taken courses such as: Data Structures, Computer Architecture, Computer Vision, Cryptography, Operating Systems, Algorithms, Game Technology, Differential Equations, Probability, Statistics, Number Theory, Algebraic Structures, Topology.

Experience

May 2023 - Aug 2023 **Two Sigma** New York, NY

- Designed a mapping from a log file format to a unified protocol used by preexisting internal tools
- Developed a high performance converter based on the design in C++
- Extracted important metadata from orders and generated metrics tables from data using Pandas
- Automated pipeline for processing log to uploading metrics using a script
- Generated visuals of data using Google BigQuery and Looker

May 2022 - Aug 2022 **Two Sigma** Houston, TX

- Rebuilt existing product catalog tool for finding product and support information using a modern tech stack
- Built a REST API for programmatic access of product information using Dropwizard for Java
- Designed a modern web interface to explore data using Angular and Angular Material
- Wrote unit tests using JUnit and Mockito to ensure program validity and accuracy

May 2021 - Aug 2021 **APIus CompSci** Cypress, TX

- Developed an online IDE built off the LAMP stack capable of editing, running, and saving user inputted Java or Python code
- Implemented a dynamic user interface that updates as the user makes changes using JavaScript and jQuery
- Created a robust file saving and retrieval system using AJAX calls and managed database queries using PHP
- Restructured various software design issues and patched severe vulnerabilities

Projects and Activities

Nov 2022 - Dec 2022 **Chengine** Austin, TX

- Designed a chess engine using C++ with full knowledge of the rules of chess
- Built an interactive UI for the user using the SDL graphics library
- Implemented an opponent bot that played moves using a alpha beta pruning tree search on board positions
- Added heuristics to score boards for positions too far deep to improve performance

Sep 2021 - Oct 2021 **NeuralNetworkJava** Cypress, TX

- Developed a neural network library from scratch in Java capable of recognizing patterns in data with no external libraries
- Learned about neural networks and how they learn from data using stochastic gradient descent
- Implemented basic linear algebra methods such as matrix multiplication as well as the backpropagation algorithm, which efficiently computes the necessary changes to the network in order to be more accurate
- Used Object Oriented Programming principles to abstract the implementation of certain functions in order for more generic and customizable functionality

Skills

- **Programming Languages:** Java, C/C++, JavaScript, Python, PHP, SQL, Bash
- **Frameworks and Programs:** HTML/CSS/JS, AJAX, jQuery, React, Angular, Node.js, MySQL, Qiskit, PyTorch, Pandas
- **Concepts:** Algorithms, Software Development, Cryptography, Cybersecurity, Machine Learning, Git

Awards/Certificates

May 2021 **UIL 6A State Champion for Computer Science Team Event** Texas

- Placed first in the Computer Science Team event for the Texas 6A Conference, a team event that tests knowledge in algorithms and programming through several coding questions

March 2020 **American Invitational Mathematics Exam Qualifier** National

- Scored a 108 on the AMC 12 B 2020 exam and qualified for the AIME