

Tanvi Karandikar

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Education

Carnegie Mellon University

Master's in Computational Data Science (Systems Track)

Pittsburgh, PA

Aug 2022 - Dec 2023

International Institute of Information Technology

B. Tech (Honors) in Computer Science and Engineering, CGPA – 9.63/10

Hyderabad, India

July 2018 - June 2022

Dean's List Award for Academic Excellence (all semesters), Batch Best All Rounder

Technical Skills

Languages: C, C++, C#, SQL, JavaScript, Python, MATLAB, Bash, HTML/CSS

Tools/Frameworks: MongoDB, Git, Blender, Unity, OpenGL, CUDA, PyTorch, Pandas, NumPy, React, d3 JS, Latex

Selected Coursework

(* denotes in-progress)

CS: Data Structures and Algorithms, Networks, OS, Compilers, Data Systems, Distributed Systems, Cloud Computing*

AI and Optimization: Statistical Methods in AI, Optimization Methods, Machine Learning

Experience

Adobe

Internship

Bangalore, India (Remote)

May 2021 - Aug 2021

• Designed a solution to extend Adobe's Liquid Mode document reader feature to provide personalised navigation for long financial documents as per the customer's requirement. Work led to a publication, as well as a patent filed.

• Coded and delivered an end-to-end pipeline of the solution using ReactJS and Flask.

CodeZoned

Open Source Contributor

Jodhpur, India (Remote)

June 2020 - Aug 2020

• Wrote code to implement the AdaBoost multi-class classification algorithm. Included support for parallel computation on GPUs with CUDA C++.

Projects

Relational Database | C++

Fall 2021

• Developed a relational database in C++ that supports assignment and non assignment queries, indexing using B+ trees, and sorting using 2-phase merge sort.

Compiler for Racket Programs | Racket

Spring 2022

• Implemented a nanopass compiler to compile Racket programs to x86-64, with support for functions and conditionals.

Multithreading Simulations | C

Fall 2019

• Simulated a cab booking and college mess systems using mutex locks, semaphores and process synchronization.

Custom Video Games

Spring 2021

• Designed and coded a third person shooter game with custom 3D models in WebGL and created a cinematic [trailer](#).

Also coded an escape game in OpenGL with a procedural maze including obstacles, and rewards.

Research Projects

Honors Research Student at **Precog, IIIT-Hyderabad** under [Dr. P Kumaraguru](#)

May 2020 - May 2022

• Characterized and classified different classes of users on Twitter during Indian elections. Two publications.

• Analysed India's COVID-19 vaccination drive and identified inequities against the rural population.

Independent Study at **Robotics Research Center, IIIT-Hyderabad** under [Dr. KM Krishna](#)

Dec 2020 - Dec 2021

• Developed a synthetic data generation [pipeline](#) for multi-layered layout estimation in warehouses. One publication.

Selected Publications

DynamicTOC: Persona-based Table of Contents for Consumption of Long Documents

[NAACL 2022](#)

Monocular Multi-Layer Layout Estimation for Warehouse Racks

[ICVGIP 2021](#)

"I'll be back": Examining Restored Accounts On Twitter

[WI-IAT 2021](#)