DHRUVIL BHATT

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EDUCATION

University of California, Irvine (Irvine, CA) September 2022 - December 2023
Master of Computer Science **GPA: 4.0/4.0**
Current Coursework: Artificial Intelligence, Advanced Programming, Computer Security

DA-IICT (Gandhinagar, India) August 2018 - May 2022
Bachelor of Technology in Information and Communication Technology **GPA: 3.8/4.0**
Relevant Coursework: Software Engineering, Database Management System, Data Structures, Analysis of Algorithms

TECHNICAL SKILLS

C, C++, Python, JavaScript, HTML, CSS, SQL, React.js, Node.js, Next.js, Drupal, MongoDB, Firebase, Tailwind CSS, Recoil

EXPERIENCE

HuddleUp (New York, USA) March 2022 - June 2022
Software Engineer Intern

- Built a custom LMS (Learning Management System) in collaboration with frontend team to **improve the proficiency of client companies' employees**.
- Executed web pages (using Next.js) for adding new channels, challenges, and quizzes to a specific workspace, that can be utilized by client companies to impart most relevant skillset to its employees.

DA-IICT Research Lab (Gandhinagar, India) January 2022 - June 2022
Research Intern

- Led a team of 3 researchers to **curate the largest open-source dataset** (comprising of 7805 datapoint, **4 times larger** than previously available largest public dataset) for Corporate Credit Rating with Financial Ratios (Dataset Link).
- Devised a set of time-independent, simple if-else rules (using Explainable AI techniques) based on financial ratios to **help corporate firms attain investment grade rating** with a mean precision value of **95%**.
- Pictured the Decision Tree model by employing GraphViz package in Python.

Institute for Plasma Research (Ahmedabad, India) October 2020 - August 2021
Research Intern

- Designed an efficient serial algorithm in C++ for generating synthetic images of plasma.
- Integrated noises of 3 different distributions to construct more realistic plasma images, by teaming up with a fellow researcher.
- **Parallelized the developed serial algorithm** (with OpenMP API), resulting in **2100%** increase in speedup (creating a synthetic image of plasma in less than **0.65 seconds**).
- Visualized pinhole camera, line of sight, and orientation of plasma using Three.js (a JavaScript 3D library).

Indian Institute of Technology (IIT) – Bombay (Mumbai, India) April 2020 - June 2020
Software Developer Intern

- Facilitated content migration from Drupal 6 and 7 websites to Drupal 8 **using custom-made plugins**.
- **Migrated** *hss.iitb.ac.in* from Drupal 7 to 8 **without any data loss**, using custom-made plugins and other modules (Fellowship Report).

PROJECTS

Real-Time Chat App | *React, Node.js, MongoDB, Socket.io, CSS*

- Coded a **real time web app for chatting, synced with Google account**. Users can converse with multiple contacts, and can see whether another person is currently logged in or not.
- Read messages are differentiated from unread ones by different color codes (Link to web app).

Job Search Portal | *Next.js, MongoDB, Tailwind CSS, Recoil*

- Launched a **fully responsive social media platform**, allowing users to post job seeking/opening information.
- Implemented theme toggle, and latest news posting feature (using Google API) (Link to web app).

Hierarchical Clustering of World Cuisines | *Python, Pattern Mining, Postman API*

- Characterized unique features central to 25 different world cuisines to **formulate inter-relatedness of these world cuisines** (using *FP-Growth Algorithm*).
- Produced 3 dendrogram (for distinct distance metrics) to **visualize the interrelationship between different world cuisines** leveraging Hierarchical Clustering technique.

RESEARCH & PUBLICATIONS

- Kirtan Delwadia, Dhruvil Bhatt, Shishir Purohit, and Bhaskar Chaudhury, "*Parallel algorithm for synthetic image generation with application to tokamak plasma diagnostics*," published by "Concurrency and Computation: Practice and Experience" journal (DOI: **10.1002/cpe.7217**).
- Ravi Makwana, Dhruvil Bhatt, Kirtan Delwadia, Agam Shah, and Bhaskar Chaudhury, "*How to Get Investment Grade Rating in the Age of Explainable AI?*," submitted at "Expert Systems with Applications" journal (Listed on **SSRN's Top 10 download list**) (under review).