

# DHRUVIL BHATT

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## EDUCATION

### University of California, Irvine (Irvine, CA)

September 2022 - December 2023

*Master of Computer Science*

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**

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).