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: Advanced Programming, Computer Security, Machine Learning, Data Structures

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, Object Oriented Programming, Algorithms

TECHNICAL SKILLS

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

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 (research paper listed on **SSRN's Top 10 download list**).

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 with Three.js (a JavaScript 3D library).
- "***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).
- "***Computational Modeling Of Noisy Plasma Images Applicable To Tokamak Imaging Diagnostics For Visible And X-Ray Emissions***," accepted at "9th International Conference on Mathematics and Computing (ICMC-2023)" conference.

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, Material UI* | (Link to web app)

- 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.
- Accomplished real-time communication using WebSockets and Node.js.
- Designed front-end of the web app leveraging Material UI components, and React.
- Handled user authentication and storage of user, conversation, and message information through MongoDB.

Job Search Portal | *Next.js, MongoDB, Tailwind CSS, Recoil* | (Link to web app)

- Launched a **responsive social media platform**, allowing users to post job seeking/opening information.
- Implemented theme toggle, and latest news posting feature using Google API.
- Built user interface using TailwindCSS for a responsive and visually appealing design.
- Executed MongoDB CRUD operations using Mongoose.
- Utilized Recoil to manage state of the application and improve performance.