# DHRUVIL BHATT

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## EDUCATION

**University of California, Irvine (Irvine, CA)**　　　　　September 2022 – December 2023
*Master of Computer Science*　　　　　**GPA: 3.95/4.0**
Relevant Coursework: Advance Programming, Machine Learning, Computer Security, Operating Systems, Algorithms

**DA-IICT (Gandhinagar, India)**　　　　　August 2018 - May 2022
*Bachelor of Technology in Information and Communication Technology*　　　　　**GPA: 3.8/4.0**
Relevant Coursework: Data Analysis, Database, Object-Oriented Programming, **Linear Programming, Data Structures**

## TECHNICAL SKILLS

**AWS Certified Cloud Practitioner, Azure, GCP, Docker, Kubernetes,** C/C++, Python, JavaScript, Typescript, React, Next, Node, SQL, MongoDB, HTML, CSS, Machine Learning (Researcher), Git, **Distributed Systems, MPI, OpenMP**

## EXPERIENCE

**Synaptics Incorporated (Irvine, USA)**　　　　　June 2023 – September 2023
*Audio Software Intern*

- Engineered an **Azure-based** calling application, integrating **Microsoft Graph API v1.0**, MSAL (Microsoft Authentication Library), **GraphQL APIs**, and MS Teams with Synaptics' headsets for audio testing.
- **Bridged the gap between business and technology**, and integrated **speech recognition (Web Services)** feature into the Azure calling application for generating speech-to-text transcripts for headset debugging.
- Created a software application on host side to parse UART (universal asynchronous receiver transmitter) data formatted in binary HCI format. Implemented extraction of debug messages from received data.
- Honed corporate communication and interpersonal skills: Owned project delivery by **pitching to the CEO** as well as **Japanese counterparts and clients for Synaptics.**

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

- Worked in a high-growth, **dynamic, fast-paced environment** to build a custom LMS (Learning Management Systems) in collaboration with frontend team to improve productivity of client companies' employees.
- Executed web pages (using **Next.js** and Tailwind CSS) for adding new channels, challenges, and quizzes to a specific workspace, facilitating delivery of relevant skill sets to employees.

**DA-IICT Research Lab (Gandhinagar, India)**　　　　　January 2022 - June 2022
*Software Engineer Intern (Computational Finance Researcher)*

- Led a team of 3 researchers in curating the **largest open-source Corporate Credit Rating dataset** using **ETL data pipeline**, consisting of 7805 data points, 4 times larger than the previous largest dataset. (Dataset Link).
- Devised a set of time-independent strategies (using **Explainable AI/ML techniques**) based on financial ratios to **help corporate firms attain investment grade rating** with a mean precision value of **95%**.
- Employed the GraphViz package in Python to visualize the **Decision Tree model** (research paper listed on **SSRN's Top 10 download list**).

**Institute for Plasma Research (Ahmedabad, India)**　　　　　October 2020 - August 2021
*Software Engineer Intern (Researcher)*

- Designed an efficient serial algorithm code in C++ for generating synthetic images of plasma.
- Collaborated with a fellow researcher to combine noises of 3 distributions to construct realistic plasma images.
- **Parallelized** the serial algorithm (with OpenMP API) using **High Performance Computing (HPC) techniques**, resulting in **2100%** growth in speedup (synthetic image of plasma created in less than **0.65 seconds**).

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

- Facilitated content migration from Drupal 6 and 7 websites to Drupal 8 **via custom-made plugins**.
- **Migrated** *hss.iitb.ac.in* from Drupal 7 to 8 **with 100% retention of website content**, harnessing custom-made plugins developed for the **open-source** community. Used **Agile software development techniques.**

## PROJECTS

**DocLab - Work Smarter, Collaborate Better** | *AWS EC2, React.js, Node.js, Python, Flask, Quill.js, Socket.io, MongoDB*

- Worked in a **collaborative environment** to develop DocLab, an innovative **AI-powered document editor** featuring auto text correction, paraphrasing, summarization, collaboration, and video calling support.
- Consolidated video calling and screen-sharing capabilities, ensuring a **low video/audio latency** of 300ms.
- Deployed the **Flask-based AI model on AWS EC2 for scalable and reliable access** to DocLab's AI features.
- Designed **RESTful Web Services and APIs** with Axios for seamless frontend-backend communication and MongoDB CRUD operations**,** ensuring fast page load time (< 2 seconds).

**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.
- Accomplished theme toggle between 2 themes, and utilized Google API for the latest news posting feature.
- Executed MongoDB CRUD operations using Mongoose, and utilized Recoil to manage state of application and improve performance.