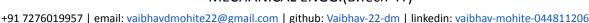


VAIBHAV DASHRATH MOHITE | 20ME10092

MECHANICAL ENGG.(B.Tech 4Y)





EDUCATION

Year	Degree/Exam	Institute	CGPA/Marks
2024	B.TECH	IIT Kharagpur	8.90 / 10
2020	HSC	Global Public School & Junior College	85.38%
2018	SSC	Boys' Town Public School	96.60%

INTERNSHIPS

Software Development Engineer Internship | Amazon, Hyderabad

[May 2023 - June 2023]

Project: One-stop portal to trigger automation tests, remote access to physical devices, and Dashboards for Alexa Voice Services Quality Assurance team Designed and implemented a workflow to keep track of the status of Alexa-enabled devices used for automation by utilizing DynamoDB and SSM Agent

- Reduced latency of video streaming in Virtual Devices Lab from 4 seconds to 1 second by replacing KVS only streaming with WebRTC based streaming
- Stored execution time of automation test runs and regularly updated the average execution times using AWS EventBridge Scheduler and AWS Lambda
- Asynchronously updated device status using SNS and Lambda functions and automatically sent emails to the users using SES on completion of test runs

Software Development Internship | 9Island Technologies, Bangalore

[Nov 2022 - Feb 2023]

- Project: Vaisnava Marriage Bureau an active open-source matrimonial website to assist devotees of ISKCON organization get married to the right partner • Integrated Terms of Service feature in a django based Matrimonial website using the django-tos package to facilitate auto-update of the terms of service
- Added unit tests to test the django application using pytest package, generated dummy data using factory and added pagination to profile search page
- Implemented a user activity timeline feature using the django-activity-stream package and integrated an image-cropper tool using the cropper-is library

PROJECTS

Adversarial Attacks on ML Models | Bachelor's Thesis Project | Guide: Prof. Ayantika Chatterjee

[May 2023 - Present]

- Conducted in-depth review of research papers on adversarial attacks like Universal Adversarial Perturbations and defense algorithms like NEO-defense Translated theoretical knowledge into practical skills by successfully implementing an adversarial backdoor attack on a dog-cat classifier (neural network)
- Validate the effectiveness of universal perturbation vectors generated by the deepfool algorithm in the encrypted domain using the concrete-ml library

AI-Enabled Chess Game | Self Project

[July 2023 - Aug 2023]

- Built a JavaScript based chess game with move validation, Object Oriented Programming based game state, and implemented rules for game results
- Implemented the play-with-computer feature by using the minimax algorithm to estimate the next best move and optimized it using alpha-beta pruning • Utilized Express.js framework for creating APIs for functionalities like registration and authentication based on jwt and utilized MongoDB as a database
- Added real-time updates of moves played during the game by leveraging the web socket protocol implemented using the Node.js based socket.io library

Advanced Blogging Portal | Self Project

[June 2023 - July 2023]

- Created a django blogging portal with features like automatic summary generation, natural language search, and customized django-admin as per roles
- Integrated Rich Text Editor using django-tiny-mce package in the django-admin and added listen to the blog feature by generating audio using gtts Deployed the project on AWS EC2 instance and enabled CI/CD by using Github Actions for smooth deployment and delivery of changes in the code

ApnaInsti | Developers' Society, IIT Kharagpur

[Dec 2022 - Jan 2023]

- Developed an Institute-wide Android Application using React Native for managing extra-curricular activities of a community of more than 10,000 students
- Increased accessibility to information by bringing details of events, opportunities, news, halls, departments, faculties, and issued certificates in one app
 Designed the database schema for the project involving multiple applications and built the API schema for efficient flow of data between app and server
- Built APIs for Buy & Sell Portal and Facilities Portal using django-rest-framework, used AWS EC2 as web server and AWS RDS (PostgreSQL) for database

COMPETITIONS

Sigmoid Data Science Hackathon | Sigmoid | Bronze

[Aug 2022 - Oct 2022]

Objective: Develop a robust pipeline for forecasting the demand for multiple products from various categories in the Consumer Packaged Goods industry • Excelled in a highly competitive hackathon that spanned three stages and secured an impressive third position out of more than 150 participating teams

Utilized Fast Fourier Transform to smoothen the data with outlier treatment and performed warehouse based segmentation to build individual models

Performed time series forecasting with an ensemble of models which included Facebook's Prophet, Transformer, and TBATS, achieving a WMAPE of 0.26

Inter-Hall Open Soft Competition | Gymkhana Championship | Silver

[Jan 2022 - Mar 2022]

Objective: Develop an end-to-end cloud-based solution for a fast-food chain to make sure that critical services work even when other services are down • Won the Silver medal among 15 participating teams and developed a containerized scalable back-end architecture using open-source technologies

Created microservices based APIs using django-rest-framework, designed the database schema, and developed frontend using the React.js framework

Website Hackathon | Technology Students' Gymkhana, IIT Kharagpur | Gold

Objective: Develop a one-stop solution to manage all the co-curricular and extra-curricular activities under the purview of Technology Students' Gymkhana • Led a team of 11 members to win the podium in multiple categories and achieved the prestigious First Position among more than 15 participating teams

- Built a React.js website served through APIs made using django-rest-framework along with jwt based authorization and email verification through OTP
- Incorporated innovative features like Bill Reimbursement Portal, Grievance Portal, real-time Notifications, and an Admin Panel for content management

SKILLS & EXPERTISE

Programming Languages: C | C++ | Python | JavaScript | SQL DBMS: MySQL | PostgreSQL | MongoDB | Redis* Software tools: Git | Linux | Docker | AWS Frameworks & Libraries: Django | Flask | DRF | Channels | Pytest | Selenium | OpenCV | React.js | Redux | React Native | Express.js | Next.js* [*familiar]

COURSEWORK INFORMATION

University: Machine Learning Foundations and Applications (Al42001) | Programming and Data Structures (CS10003) [incl. lab] | Linear Algebra (MA11004) MOOCs: Machine Learning | Improving Deep Neural Networks: Hyperparameter Tuning, Regularization and Optimization | Convolutional Neural Networks

POSITION OF RESPONSIBILITY

Development Head | Developers' Society, IIT Kharagpur

[Aug 2022 - May 2023]

- Co-founded the Developers' Society, IIT Kharagpur to assist the technology needs of the student community and foster a software development culture
- Created a Societies' Portal enabling the societies to post events on the ApnaInsti App and guided juniors to develop an Admin Panel for the ApnaInsti App

Associate Manager | Entrepreneurship Cell, IIT Kharagpur

[Dec 2021 - June 2022]

- Built a website for campus ambassadors, incorporating a leaderboard that updated automatically on registration with a referral code of the ambassadors
- Contributed to various tech projects of E-Cell such as the Startln 12.0 portal, EAD-LSM website, and Global Entrepreneurship Summit registration portal

EXTRACURRICULAR ACTIVITIES

- Contributed to the paradime.io event of Inter IIT Tech Meet 11.0 as a dev team member and participated in the Inter-Hall Rangoli making competition
- Player of two-time medal-winning (Gold-2022 and Silver-2023) Inter-Hall Hockey team of Rajendra Prasad Hall and served as an NCC cadet for two years