

MOHAMMAD UMMAIR

in mohammad-ummair ✉ mohdummair.placements@gmail.com ☎ (+91)8623816377

Work Experience

- **Software Developer at Apple, India** *(July 2023 - Present)*
 - Leads the **development of new APIs and features** for a **mission-critical module** utilized by over 10 cross-functional teams, significantly improving operational **efficiency and scalability**.
 - Managed **database operations**, including updates, backups, and performance tuning, to uphold **data integrity** and ensure reliable system performance.
 - Introduced sophisticated **performance monitoring techniques**, guaranteeing the enduring **quality and reliability** of test node infrastructure.
- **Plus Educator at Unacademy, India** *(May 2021 - June 2021)*
 - Mentored a batch of **20+ students**, provided guidance to students for GATE preparation.
 - Implemented **performance improvement plans** for under performing students using Customised **Daily Practice Problems**.
- **Project Intern at Tata Consultancy Services, India** *(Feb 2021 - May 2021)*
 - Deployed various **time series models** to **forecast client's export** demands which helped the company maintain stock for every day.
 - Developed **hierarchical time series** to predict client's export data
- **Machine Learning Intern at TechInvento, India** *(May 2019 - June 2019)*
 - Developed an automated **computer vision tool** to **digitize handwritten documents** which saved **\$1.5mn every month**.
 - Deployed **web application** using Node.js to monitor changes made by **computer vision algorithm**.

EDUCATION

- **Indian Institute Of Technology, Bombay** *Aug 2021 - Present*
Master of Technology, Computer Science
- **Government College Of Engineering, Aurangabad** *Aug 2017 - June 2021*
Bachelor of Engineering, Information Technology

OPEN SROUCE CONTRIBUTION

- **File-Reloader, <https://pypi.org/project/file-reloader/>** *Jan 2023 - Jan 2023*
 - Developed and maintained **File-Reloader**, a Python package designed to streamline file reloading during development or runtime.
 - Implemented automatic file monitoring functionality, enabling seamless detection of changes to files, reducing manual intervention, and increasing developer productivity.

PROJECTS

- **Solidity+ : A framework to detect bugs and vulnerabilities in smart contracts** *(Jan'22-till date)*
 - Analysed **300+ smart contracts** to identify possible vulnerabilities.
 - Designed algorithm to **detect possible vulnerabilities** and different bugs.
 - Implemented Framework to detect and notify users of the present vulnerability.

- **Key-Value Server Using GRPC** (CS744: Design and Engineering of Computing Systems, Autumn 2021)
 - Objective: To implement a **in-memory key-value store** as a client-server application running over TCP sockets.
 - Created a **multi-threaded server** that maintained KV pairs and a KV client that accepted user commands to manipulate KV pairs. Execution of these commands was done by communicating with KV server over sockets.
 - Implemented different caching techniques and also integrated **persistent storage** with it.
- **Bitcoin Simulation** (CS762: Blockchain Technology, Spring 2022)
 - Deigned and implemented **simulation of Bitcoin** Environment .
 - **Programmed** a simulation such that a number of transactions were created in a fraction of seconds and were used to make new blocks.
- **Advanced Manticore : An Enhanced Version Of Manticore** (CS762: Advanced Blockchain Technology, Spring 2022)
 - Objective: To make Manticore resilient to common bugs that are currently undetectable.
 - Detected **shortcomings of Manticore** by examining **over 100 smart contracts**.
 - Immuned Manticore against short comings like unchecked sends, gasless sends and many more.
- **Asset Performance Monitoring Application**
 - Objective: To develop an **asset performance monitoring application** integrated with machine learning algorithm.
 - Developed an APM which was integrated with **Machine Learning Algorithm** to **optimise performance** of mechanical devices used in industries.
 - This APM was made as a part of **Smart India Hackathon 2020**. APM takes realtime Machine data as input and provides the most optimal output expected from the machine.

POSITION OF RESPONSIBILITIES

- **Department Placement Co-ordinator** (July'22-Present)
 - Appointed as Department Placement Co-ordinator for Computer Science Engineering department of IIT Bombay to ensure smooth execution of placements.
- **Web Secretary, CSE Department - IIT Bombay** (July'22-Present)
 - Appointed as Web Secretary for Computer Science Engineering department of IIT Bombay to maintain CSE web pages.
- **Teaching Assistantship**
 - **CS 251:** Software Systems under **Prof. Amitabha Sanyal.** (Autumn 2021)
 - **CS 254:** Digital Logic Design Lab under **Prof. Virendra Singh.** (Spring 2021)
 - **CS 744:** Design & Engineering Of Computing Systems under **Prof. Mythili Vutukuru.** (Autumn 2022)
- **Event Head , Cicada GECA Wings 2K20** (Jan'2020 - Feb'2020)
 - Superheaded a **team of 16 students** for successful execution of a **national level technical event** with more than 100 participants
- **Event Coordinator, Short Term Training Program, GECA** (Jul'2020 - Jul'2020)
 - Volunteered as an Event Coordinator for training program organised to train professors about MATLAB.
- **Department Technical Committee Member, IT Department- GECA** (May'2017 - May'2018)
 - Appointed as **Technical Committee Member** for Information Technology department of Government College Of Engineering Aurangabad to maintain Systems and Labs.

ACADEMIC ACHEIVEMENTS AND EXTRA CURRICULAR ACTIVITES

- Secured **All India Rank 95** amongst 101922 students in **GATE CS 2021**.
- Winner of **Smart India Hackathon 2020** under the problem statement process modelling, GAIL India Pvt. Ltd.