RISHAB RAMANATHAN

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Education

Mahindra University, École Centrale School of Engineering   Hyderabad, India
Bachelors of Technology in Computer Science   *July 2019 - June 2023*

Hiranandani Foundation School   Thane, India
Senior Secondary High School   *April 2017 - March 2019*

Experience

Mahindra University   Hyderabad, India
Research Assistant   *July 2023*
- Working on a quantum algorithm implementation of Discrete Cosine Transform, used in JPEG image compression standards.
- Focusing on developing an end-to-end compression algorithm to apply in the Autonomous Underwater Vehicle for efficient parsing of underwater images.

Minerals Technologies Pvt. Ltd.   Thane, India
Robotic Process Automation Development Intern   *June 2022 - August 2022*
- Implemented a complete automation of the office service receipt processing.
- Assisted in the automation of the new employee on-boarding process.

Personal Projects

Image Compression using QDCT   **March 2023 - June 2023**
- Working on a quantum computing implementation of Discrete Cosine Transform, used in JPEG image compression standards. Developed circuits for FRQI, NEQR image representations, and worked on devising an Oracle function for the modified Grover's search algorithm.

CovIndia - LINK   **March 2020 - May 2020**
- India's first student driven district-wise tracking website for the Covid-19 virus. Handled a partially automated data acquisition model using Twitter and web scraping methods

AR for school textbooks - LINK   **September 2022 - December 2022**
- A real-time augmented reality application for implementing education-based experiment modeling onto school textbooks, using text-recognition based AR. Developed a working prototype and tested image target accuracy for textbook specific data-sets of varying length

The Chimp   **September 2019 - June 2022**
- An off-road buggy designed, manufactured and tested from scratch by the college racing team, Gas Monkeys, to compete in the collegiate ATV racing competition, SAE Baja. Assisted in designing the key components of the roll cage and chassis, and manufacturing of the chassis and its composite components

Pop and Block - LINK   **April 2021 - June 2021**
- A live tracker for cryptographic currency prices, with various statistical analyses such as historical trends, rate of volatility, and prediction.

Komal - LINK   **May 2020**
- A passion project exploring the art and technique of amateur film-making, with an exploration of basic cinematrographic techniques.

Technical Skills

Programming Languages: C, C++, python, Java, HTML
Platforms and Tools: Linux, Git, Android Studio, Unity, Raspberry Pi, Qiskit
Languages: English(Proficient), Hindi(Proficient), Tamil(Spoken)

Volunteer Experience

Media Club   **July 2019 - January 2021**

- Served as a team member from July 2019 – April 2020, and the club head from April 2020 - January 2021. Assisted in media documentation and coverage of every major college festival and event. Presided over various college-wide photography and film-making competitions

TedXMahindraUniversity   **November 2020 - March 2021**

- Served as the head of the Technical and Media division of TedXMahindraUniversity, presiding over the live streaming scene setup for individual presenters, creation of the introductory video, and the after movie for the online-only TedX event during the Covid Pandemic

TedXMahindraEcoleCentrale   **December 2019 - March 2020**

- Served as a member of the Curations team of TedXMahindraEcoleCentrale, deciding on the theme of the event, and collaborating with potential presenters for said event