TEJASHVI RAJ

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Skills

- **C++ | Java | Python | MATLAB| SIMULINK| VLSI Design| Embedded Systems | NoSQL | Git**
- **OOP's| English, Hindi – All professional proficiency or above**

Certifications

- **VLSI Design – Maven Silicon:**
  Completed a comprehensive VLSI Design Internship Program offered by Maven Silicon in association with ACEIC. Worked on a hands-on project involving RISC-V ISA & RV321 RTL Design, gaining practical experience in hardware design and verification.
- **MongoDB Associate Database Administrator – FACE Prep**
  Successfully completed a certification course on *MongoDB Associate Database Administration* conducted by FACE Prep.The course recognized outstanding performance and practical understanding of MongoDB essentials, administrative operations, and database design strategies.

Projects

DHARA: The Ultimate Hydro Manager **Dec'24**

Developed an innovative smart hydroponic system designed to optimize sustainable food production by integrating aquaponics, promoting both plant cultivation and fish growth.

- **Integrated Aquaponics:** Engineered a mutually beneficial ecosystem where fish waste nourishes plants, and plants purify water, maximizing productivity and resource efficiency..
- **Real-Time Monitoring:** Implemented advanced sensors for continuous monitoring of humidity, pH, and TDS, ensuring optimal growing conditions and providing emergency alerts for quick intervention.
- **Resource Efficiency:** Achieved sustainable practices by minimizing water consumption and eliminating synthetic fertilizers, reducing resource use compared to traditional farming.
- **Increased Profitability:** Enhanced profitability through higher output per square meter and dual cultivation of fish and plants, enabling diversified income streams for small-scale farmers and urban gardeners..
- **Comparative Analysis:** Demonstrated the advantages of hydroponics over conventional agriculture, including higher yields, reduced land use, and a smaller environmental footprint, offering a sustainable solution for growing food demand.

Aquatic Life Monitoring System **Sep'23**

Developed a system to measure key water quality parameters—TDS, pH levels, and turbidity—for maintaining healthy aquatic environments.

- **Water Quality Analysis:** Designed a system to monitor TDS, pH, and turbidity to ensure suitable aquatic conditions.
- **Real-Time Monitoring:** Used sensors for continuous tracking of water parameters and timely issue detection.
- **Accurate Data Acquisition:** Developed algorithms to improve precision and reliability in data measurement.
- **Sustainability and Ecosystem Health:** Promoted sustainable aquatic environments by facilitating informed decision-making for water quality management..
- **Scalable Solution:** Built a modular setup adaptable to various aquatic ecosystems.

Education

VIT Bhopal University **2022 - 2026 (expected)**

- BTech In Electronics and Communication Engineering| CGPA: **8.42**

Positions of Responsibility

VITroniX Club | Electronics Team Co-Head **Jul'24 - Feb'25**

- **Managed VITroniX:** Spearheaded a series of electronics-focused workshops and tech sessions, engaging over 100 participants. Events included hands-on training, project mentorship, and seminars on embedded systems and circuit design. These initiatives led to a 35% increase in student participation and a 30% rise in positive feedback, significantly enhancing the club's technical impact.