SOUMIK ROY

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Technical Skills

Java, Python, JavaScript, HTML, CSS, MongoDB, MySQL, React Js, Node Js, GitHub, API, Power BI

Internship

Full-Stack Developer Intern for EnerQuest Solutions   **July 2025 - September 2025**

- Engineered a responsive website using HTML5, Tailwind CSS, and JavaScript over a 90-day project, enhancing user engagement through intuitive UI/UX and accessibility features.
- Streamlined front-end performance with Tailwind CSS, cutting page load times and improving SEO rankings, cross-browser compatible components, achieving a great client satisfaction.

Full-Stack Developer Intern at Pratigya NGO   **June 2023 – July 2023**

- Designed and developed responsive web content for Pratigya's official website during a 30-day remote internship from June 15, 2023, to July 15, 2023, significantly enhancing user interface design and website accessibility features.
- Successfully contributed to the NGO's educational mission by creating engaging digital solutions and improving online presence, directly supporting quality education initiatives for underprivileged children.

Projects

Divya-Drishti – AI-Powered Assistive Platform for Accessibility | *Next.js, Twilio API, OpenCage API*   **Link**

- Designed and developed a comprehensive AI-powered assistive platform that enables visually impaired individuals to navigate safely through real-time obstacle detection and empowers deaf-mute users to communicate effectively using advanced sign language recognition technology. Successfully deployed the full-stack application on Vercel with seamless performance and accessibility features.
- Implemented the solution using Next.js for responsive full-stack development, integrated YOLOv5 object detection model for accurate obstacle identification, utilized Twilio API for emergency SOS call functionality, and incorporated OpenCage API with MapBox integration for precise location services.
- Served as Full-Stack Developer responsible for end-to-end application development.

Hasth-Akshar – A Sign Language Detection Model for Devanagari | *MediaPipe, OpenCV, TensorFlow*   **Link**

- Built a comprehensive Hindi sign language detection system using advanced stickman analysis, natural language processing, and deep learning algorithms to accurately transcribe video gestures into Hindi words. The system incorporates real-time gesture recognition with high accuracy to bridge communication gaps for the hearing-impaired community.
- Utilized cutting-edge technologies, including MediaPipe for pose estimation, OpenCV for computer vision processing, TensorFlow for deep learning model development, NLP for language processing, OpenForce framework, and a custom-curated video dataset. Implemented robust preprocessing techniques and feature extraction methods to enhance model performance and reliability.
- Worked on deep learning for algorithm development and model optimization.

Achievements

- **1st Runner-Up in Zelestra X AWS ML Ascend Challenge 2nd Edition** – Ranked among the top 50 out of 1500+ teams and 7000+ registrations in a nationwide ML competition.
- **Top 100 - Amazon ML Challenge 2025** – Ranked in the Top 100 out of 82,000+ participants for developing high-performing machine learning solutions and model optimization.
- **CodeClash Hackathon Finalist** – Secured finalist position among 700+ teams where we built Divya-Drishti, an AI-powered assistive platform for Specially Abled People.

Leadership & Extracurriculars

- **Founder – Eureka Club** (2024-2025) at VIT Bhopal – Founded a research and development club dedicated to fostering innovation to assist students and professors in their research work. Managed a team of over 100 members across various research projects.
- **Core Technical Team Member – IoT Club** at VIT Bhopal – Contributed as a core technical team member, helping to develop projects and build the club's website.

Education

Bachelor of Technology in Computer Science and Engineering   **Sep 2022 – Ongoing**

Vellore Institute Of Technology   *CGPA: 8.89*