Anirudh N Bharadwaj

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PROJECTS

SRDSS: SMART REGENERATIVE DECELERATION AND SAFETY SYSTEM USING IOT IN ELECTRIC VEHICLE
- Engineered a regenerative deceleration and obstacle avoidance system for enhanced electric vehicle performance.

SASS: SMART AGRICULTURAL SURVEILLANCE SYSTEM USING IoT IN UAV, S J B Institute of Technology
- Cultivated agricultural efficiency with a UAV-based Smart Agricultural Surveillance System integrating IoT for precision farming optimization and Tomato Leaf Disease Detection.

SIGHTSENSE: A DATA DRIVEN APPROACH TOWARDS ANALYZING OCULAR MOVEMENTS, Cyclops Medtech
- Developed a data-driven approach for real-time analysis of ocular movements in the healthcare domain

PORTFOLIO WEBSITE
- Crafted a personal portfolio website using NextJS as a dynamic showcase of skills, serving as a comprehensive online resume.

PROFESSIONAL EXPERIENCE

Computer Vision Engineer, Equidor Medtech LLP — 01/2024 – present, Bengaluru, India
- **EquiCOG**, a state of the art Cranio-Oculography equipment for diagnosis of vestibular pathology.
  - Design, development and optimization of eye tracker algorithm for simultaneous real time tracking with 120Hz binocular cameras using conventional OpenCV.
  - Applied advanced OpenCV techniques to enhance image analysis workflows, optimizing performance across hardware and software components.
  - Development of algorithms for analysing realtime oculomotor data.
  - R&D of Torsional Component Detection.
- Designed and implemented a production-level Camera Tool using PyQt, optimizing workflows for camera setup, alignment, and testing, crucial for device quality control.
- Development of an Encoder tool to copy files and encode videos resulting in optimization, in line with the pre-existing folder architecture, utilizing PyQt and ffMPEG with hardware acceleration protocols.
- Gained hands-on knowledge of vestibular protocols and pathologies by working closely with a Head and Neck Surgeon and the Chief Technology Officer, enhancing diagnostic accuracy and refining device applications for clinical use.

Computer Vision Consultant, Equidor Medtech LLP — 06/2023 – 01/2024, Bengaluru, India
- Research and development of a state-of-the-art eye-tracking engine for enhanced performance.
- Conducted R&D on Vestibular Solutions for detecting dizziness and balance disorders.
- Developed skills in image processing, computer vision, research, computer architecture, parallel computing, problem solving and algorithm development.

Artificial Intelligence - Research Intern, Cyclops Medtech Pvt. Ltd. — 09/2022 – 05/2023, Bengaluru, India
- Analyzed real-time ocular movement dataset to improve accuracy of computer vision algorithms.
- Developed proficiency in Python and utilizing tools such as Pandas, NumPy, and OpenCV for data analysis and image processing.

EDUCATION

B.Engg - Electronics and Communication,
S J B Institute of Technology
2019 – 2023 | Bengaluru, India
Affiliated to Visvesvaraya Technological University (VTU)
7.69 / 10 CGPA
WES Evaluated Score**: 3.50 / 4.00 GPA**

SKILLS

Python • Digital Image Processing • Computer Vision • Data Science • C++

AREA OF INTEREST

Computer Vision | Medical Image Analysis | Artificial Intelligence | Deep Learning

TEST SCORES

Test of English as Foreign Language (TOEFL)

R - 23; L - 27; S - 22; W - 27;

CERTIFICATES

Deep Learning using Medical Data: *Finland Labs*

Internet of Things using Raspberry Pi: *Finland Labs*

IoT using Amazon AWS: *Finland Labs*

PUBLICATIONS

SRDSS: SMART REGENERATIVE DECELERATION AND SAFETY SYSTEM USING IoT IN ELECTRIC VEHICLE, IEEE XPLORE
07/15/2022
- The proposed regenerative deceleration system is designed to conserve the energy of the battery to enhance EV mileage.
- Integrated obstacle avoidance for increased passenger safety using sensory information from IoT.

AWARDS AND ACCOMPLISHMENTS

- Held Secretary position in Student Council for Department of Computer Science at Sri Ramakrishna Vidyashala Pre-University.
- "Smartness" General Award recipient for exceptional achievements at Sri Ramakrishna Vidyashala Pre-University.
- Presented "**Detection of Upper Limb Movements in EEG Data** " poster on Sep 30, 2021, at Sapthagiri College of Engineering event with IETE Bangalore.
- Presented **"SRDSS: Smart Regenerative Deceleration and Safety System Using IoT in EV" paper at INCET, IEEE,** hosted by Jain College of Engineering, Belgaum.
- Awarded for Contributions to ***Certificate Course in Assessment and Rehabilitation of Vertigo and Balance Disorders***, Department of Otorhinolaryngology - Head & Neck Surgery, Yenepoya Medical College(Deemed to be University), Mangaluru, India.