

Dr. Shweta Ghodeswar

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CAREER OBJECTIVE

To be associated with a company that provides me an opportunity to utilize my research and technical skills for achieving its targets and help me give my best. I would like to use my innovative skills, management skills and hardworking nature to help the company in best possible ways.

KEY SKILLS

- Proficient in C, Python
- Expertise in machine learning and image processing
- Familiarity with UI/UX design principles
- Experience of backend development with AWS cloud platform
- Strong knowledge of frontend development using Flutter
- Understanding of ergonomics principles and assessment methodologies
- Good analytical and reasoning skills with strong communication, Problem-Solving skills with track proven record in engineering and industry
- Strong presentation skills with attention to detail and can lead, supervise and lead a team of 10 members with confidence and maximum outcome
- Detailed oriented, dedicated and dependable team player
- Ability to manage multiple tasks and work in a fast-paced environment

CERTIFICATION

Certified IOT Professional from TechnoScripts, Pune in year 2018

WORK EXPERIENCE

1. **Revergon Solutions Pvt. Ltd., Navi Mumbai, Maharashtra**
April 2023 - Present
Lead Architect

Projects handled:

A. Project Name: Posture monitoring using sensors enabled chair

Track a person's different postural positions throughout the day and provide feedback from an algorithm to warn the user to correct or change their poor posture.

- Proof of concept of posture monitoring system
- Developed incorrect posture detection algorithm for real-time posture monitoring using pressure sensors mounted on chair
- Conducted user studies to validate posture monitoring accuracy and user experience
- Analyzed data collected from pressure sensors to provide insights into posture trends and ergonomic improvements
- Presented findings and recommendations to stakeholders and clients

B. Project Name: RevAugment

Developed a chair configurator app from scratch allowing users to customize chair features and view 3D models in real-time

- Developed proof-of-concept applications showcasing chair configurator capabilities using Blender for 3D modeling and rendering
- Integrated Blender models with Three.js for real-time visualization and customization.
- Collaborated with UI/UX designers to ensure seamless user experience
- Collaborated with backend developers to deliver features on time
- Conducted performance optimizations to enhance app responsiveness and load times
- Deployed application using firebase cloud platform for scalability and reliability

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C. Project Name: Physess

Developed an app to evaluate the posture, Range of Motion, endurance and flexibility of the users and generate assessment report to address their musculoskeletal health issues

- Carried out literature review of various algorithms for pose estimation
- Integration of YOLO (pose estimation algorithm) with Flutter technology
- Implemented responsive and intuitive user interfaces using Flutter technology ensuring accessibility across devices
- Designed backend using AWS cloud platform to handle ergonomic assessment data securely and efficiently
- Generate personalized detailed reports to give insights into user's musculoskeletal health and ergonomic needs
- Collaborated with ergonomics experts and occupational health professionals to validate application features
- Conducted performance testing and optimization to enhance app responsiveness and efficiency

2. VJTI Mumbai, Mumbai, Maharashtra

Jan 2019 – March 2023

Assistant Professor in Electronics and Telecommunications Engg.

- Taught various UG and PG courses such as: E-security, Principles of VLSI, Computer Communication Networks, Analog Communication, Digital logic design, Data communication and networking.
- Handled various administrative responsibilities such as served as Departmental Exam Committee member since Aug 2019, served as Class coordinator for T.Y and S.Y (EXTC), served as project guide for undergraduate and post graduate students.
- Jointly worked with senior faculties of department in designing the scheme syllabus for T.Y.B.Tech and Final year B.Tech (EXTC) students. Also worked with senior faculties for NBA work.

3. Indian Institute of Information Technology (IIIT), Pune, Maharashtra

Aug 2016-June 2017

Assistant Professor in Electronics and Communications Engg.

- Taught Basic Electronics and Digital Electronics courses to F.Y.B.Tech students and also carried out practical sessions for these courses.
- Apart from teaching, I was also a faculty mentor of students. I have also developed Electronics Lab at IIITP.

4. Visvesvaraya National Institute of Technology (VNIT), Nagpur, Maharashtra

July 2015-May 2016

Assistant Professor in Electronics and Communications Engg.

- Taught Microprocessor course to third year students (5th sem), Biomedical Engineering to third year students (6th sem) and Communication Network and Network Applications (CNNA) to final year students (8th sem).
- Also handled various lab sessions and worked as a project guide for a group of B.Tech final year students.

PROJECTS

1. IoT based automatic room light controller

- Turns room light ON/OFF depending upon whether anybody is inside the room or not
- Consists of a microcontroller-based circuit along with Ultrasonic sensors, IR sensors, LDR interfaced with NodeMCU board

2. Modulation Recognition over AWGN and Generalized Fading Channels Using Higher Order Moments and Cumulants

- Minimize transmission overheads to provide good user data rates over harsh wireless channel conditions and meet customer requirements on cost and quality of service (QoS)
- Identify the modulation format present in the received signal in the shortest possible time with minimum prior knowledge under harsh channel conditions and minimum computational load

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3. Content based Video Retrieval Systems

- Aim was to pose a query against a video collection and design a video retrieval algorithm to retrieve a set of relevant video shots from a given video collection.
- The programming language used was MATLAB.

4. Image Enhancement

- Aim was to develop Image Enhancement Techniques which are used to emphasize and sharpen image features for display and analysis and thus improve the interpretability or perception of information in images for human viewers.
- Software used was MATLAB.

5. Microcontroller Based DC Motor Control

- Aim was to control DC Motor with the help of a microcontroller.
- The microcontroller will switch the motor ON and OFF and also rotate the motor in clockwise or in anti-clockwise direction.

6. Voice controlled wheelchair for the disabled/handicapped using RaspberryPi board

- The wheelchair is capable of moving left/right, forward/backward at different speeds to suit the persons requirement.
- Ultrasonic sensors were also integrated so that the wheelchair would stop without the person having to stop it in case an obstacle shows up unexpectedly.
- Voice commands were accepted through smartphones via Google Assistant. Thus, a disabled person could use this wheelchair by giving commands only by using his voice.

7. Night Alarm System

- A Night Alarm system was designed which works on detecting passive infrared signals.
- Once detected, an alarm will be raised and the owner will be notified about the possible break in.
- The system can be remotely turned on and off by messaging to the Alarm system.

EDUCATION

1. International Institute of Information Technology Bangalore (IIIT-B)
Ph.D in Signal Processing. Pass out Year: 2018
2. Veermata Jijabai Technological Institute (VJTI), Mumbai
M.Tech – Electronics and Telecommunications (ENTC). Pass out Year: 2010
3. Usha Mittal Institute of Technology (UMIT), Mumbai
B.Tech – Electronics and Communications (E&C). Pass out Year: 2008

PERSONAL INFORMATION

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|-------------------|------------------------------|
| ○ Date Of Birth | : 09 March 1987 |
| ○ Nationality | : Indian |
| ○ Marital status | : Married |
| ○ Languages known | : English, Hindi and Marathi |
| ○ Hobbies | : Reading, Dancing |

DECLARATION

I hereby declare that the information given above is true to my knowledge.

Dr. Shweta Ghodeswar
Mumbai, June 2024