TANVI SHET
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EXPERIENCE

IoT Engineer, Guardhat, Detroit, MI **Oct '20 – Dec'20**

- Performed SIT testing on websites and embedded devices.
- Used Atlassian JIRA for bug raising and tracking.
- Performed end to end testing (backend to front-end)
- Preparing reports and updating on the Confluence Software

Associate Software Engineer, Tech Mahindra Limited, Mumbai, India **May '18 – Jun '19**

- Performed software testing of websites along with testing of REST and SOAP web services
- Reporting and tracking the defects to the developer using JIRA portal.
- Handling of project deliverables from requirement gathering to delivery of the project into production

Test Trainee Engineer, QualityKiosk Technologies Pvt. Ltd., Mumbai, India **Jan '18 – May '18**

- Performed functional and performance testing on mobile apps and websites using Linux system.
- Raising and tracking defects on Bugzilla portal and reporting them to SIT team.
- Manual and automation testing using Quality Kiosk's tools

EDUCATION DETAILS

University of Michigan – Dearborn **Aug '19 – Jun '21**
Master of Science in Computer and Information Sciences, **GPA-3.37/4**
Coursework: Computer and Network Security, Advanced Operating System, Algorithm and Design Analysis, Embedded Systems, Database Systems, Artificial Intelligence, Robotics Embedded Systems, Data Mining

University of Mumbai, India **Aug '13 –May '17**
Bachelor of Engineering in Electronics and Telecommunications
Coursework: C Programming, Analog electronics, Digital electronics, Object oriented programming, Microprocessors and peripherals, Microcontrollers and applications

TECHNICAL SKILLS:

Programming Language: Java, C, C++, Python, HTML, MATLAB, Arduino C
IDE and tools: Eclipse, Microsoft Office, Raspberrypi, RpLiDAR, LaTeX
Database: SQL, Oracle 11g, PostgreSQL
Operating Systems: Windows, Linux, Unix, Robotics Operating System (ROS), Real-time Operating System (RTOS)

PROJECTS:

Thesis : ECG monitoring for medical emergency in a vehicle
ECG sensor will be installed in car to measure the ECG of the driver and if there is any uncertainties, it will switch the car into auto-driving mode and park it safely. In meanwhile the message would be sent to emergency contacts.

Obstacle avoiding PiCar (University of Michigan -Dearborn)
A obstacle avoiding PiCar was made using raspberryPi, ROS and RpLiDAR sensor. A 360 degree viewing RpLiDAR sensor was used for detecting the obstacle. When an obstacle was detected tye car would make a turn and avoid it.
Language and tools: Python, raspberryPi, RpLiDAR, PiCAR, ROS

Image processing using MATLAB and ROS (University of Michigan -Dearborn)
Developed a code to measure the distance of a ball from the camera using Image Processing. Three nodes were used, the first one acquired the image, second one processed it and the third one displayed the distance. Publishers and Subscribers were used.
Language and tools: MATLAB and ROS

Realtime Feedback Control using PID (University of Michigan -Dearborn)
Developed a code for controlling the PiCar using Publishers and subscribers. The speed of the car was adjusted using a PID gains and control loops.
Language and tools: MATLAB, ROS, raspberryPi, PiCAR

Machine Learning based training a perceptron to learn the AND function(University of Michigan -Dearborn)
Developed a code to train a perceptron to learn the AND function.
Languages and tools: MATLAB

Artificial Intelligence based implementation of localization with the HMM algorithm (University of Michigan -Dearborn)
Developed a code in which the location of a robot is predicted in a maze. Applied prediction and filtering to determine the probability of robot's presence in a particular position.
Languages and tools: Python

Artificial Intelligence based A* and Depth First Search (University of Michigan-Dearborn)
Developed a code in which a robot finds the optimal part to reach a goal state in a maze. It followed Depth First Search and A* search algorithm.
Languages and tools: Python

You are being watched! – Home security project with Jetson Nano (University of Michigan-Dearborn)
A project was designed which involved a Jetson Nano. A raspberry pi camera provided a live streaming video to Jetson Nano. When a person visits, the name of the person was shown on the screen. The project uses face recognition to identify the person. The activities of the person standing in the front of the camera was sent in the form of email which had a video and the photo of the concerned person. Jetson Nano has an in-built support to neural networks which in turn supports Artificial Intelligence.
Languages and tools: Python

"Are my secrets still a secret?": Is Your IoT Device Putting Your Privacy at Risk? **(University of Michigan-Dearborn)**
Researched about privacy risks associated with IoT devices including wearables, digital assistants, smart homes and connected cars. Conducted awareness program for making people aware of privacy risks associated with their smart devices. Suggested measures to make people aware of the privacy concerns

Bidirectional Visitor Counter with automatic light control (S.I.E.S. Graduate School of Technology)
Designed a project that involved infrared sensors for counting the number of people. As soon as the first person enters, the lights of the room switched on. When there were no people left in the room, the lights in the room were switched off.
Languages and tools: Arduino C, Arduino micro-controller board

RFID based Vehicle Identification during collisions (S.I.E.S. Graduate School of Technology)
Designed a RFID based system which detects collisions with the help of piezoelectric sensor. The output of piezoelectric crystal was given to RFID reader via Arduino micro-controller board. The RFID reader gets activated and stores the details of collided car. This detail was then sent to stored emergency numbers via GSM.
Languages and tools: Arduino C, Arduino micro-controller board