Bhavin Ingle

Final Year B.E (EXTC)

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Education

Examination	Board	Institute	Year	CGPI/%
Graduation	Mumbai University	Sardar Patel Institute of Technology	SEM VI	7.1
12th	C.B.S.E	Bright Day School, Vadodara	2016	76%
10th	C.B.S.E	Bright Day School, Vadodara	2014	85%

Sponsored Projects

- **Texas Instruments Design Challenge '18**
  DEC 2018 - JULY 2019
  - Developed a **remote monitoring device for live analysis** of water quality parameters like Dissolved Oxygen, Ammonia, pH, etc in Aquafarms and fisheries
  - Worked on TI-MSP-430, SIM908 & NodeMCU
  - Used Google Cloud Platform for Analysis
  - Web app for control/display
  - Product Development Fund of **INR 5 Lakhs**

- **Eyantra - IIT Bombay**
  DEC 2018 - FEB 2019
  - Theme: Pollinator Bee
  - Improvised algorithms for **stabilizing a quadcopter during its flight** to localize it under a camera frame
  - Worked on ROS, Gazebo and Drona-X

- **Mitsubishi Electric Cup '19**
  NOV 2018 - FEB 2019
  - Combined Image Processing and Factory Automation Components to design a prototype for **Palletizing of packages based on their dimensions**
  - Worked on FX5U PLC, HMI G2000, MELSERVO and D700 VFD
  - Used **AWS Platform** for Digitalization
  - Sponsorship worth **INR 2 Lakhs**

- **ARM Design Challenge**
  SEP 2018 - JAN 2019
  - A **plug and play device for OBD-II ports present in cars** to access system data and provide analytics using that data directly to users and data driven companies
  - Worked on ARM NXP and SensorHub

Academic Projects

- **Alert Correlation and Classification using Machine Learning Approach**   CURRENT
  - To effectively use UNIX log files to enhance system and network security
  - Develop a more accurate IDS using alerts from NIDS and HIDS - similar to modern SIEM
  - Automate the process of correlation using various machine learning techniques and provide a comparative study mapping these techniques to their best use cases
- **Induction Heating using Pulse Density Modulation**   JAN - APR 19
  - Power regulation and control for an Industrial Induction vessel heating system
  - Used Atmega 32 and Microchip Controllers for firing PWM pulses and max. power point tracking

Skills

Languages : C++, Python, Ladder, LaTeX, Basic Web Development (LAMP), SQL

Tools : AWS, GCP, Tensorflow, Thingspeak, Prelude, Suricata | **Frameworks** : BootstrapCSS, Laravel

Environments : Visual Studio, GX Works, GT Designer, Code Composer Studio-4 and Arduino-IDE

Hardware : Atmega 32, FX5U PLC, GS2000 HMI, MELSERVO, VFD D700, R-Pi, Node-MCU

Internships & Training --

- **Internship - VPS Techhub** - SP TBI   MAY - JUL 16
  - Profile : Web Developer
  - Deployed a Billing Module to generate billing information for clients in a clinic/hospital
  - Maintained and patched running websites

- **Quantiphi Workshop -** QDemy - Cloud Computing   APR 19
  - 2-Day comprehensive workshop to get to know the working of cloud computing
  - A hackathon at the end with the task to containerize an application and make two docker images that would communicate to each other

- **FA** - **Mitsubishi Electric India** - FA & Industrial Division - Pune   NOV 18 & JAN 19
  - Hands on training on Mitsubishi Electric Factory Automation products - FX5U PLC, GS HMI, MR-JE Servo and VFD-D700 held at Pune

- **Linux System and Network Administrator** - SCOPE   FEB - MAR 18
  - After college course to understand **linux systems and networking** concepts

Awards & Achievements --

- **2nd Appreciation Prize** Nationally in **4th Mitsubishi Electric Cup** held at Manav Rachna Institute, Delhi   2019
- **Finalist** in DST & Texas Instruments' **India Innovation & Design Challenge** anchored by IIM Bangalore   2019
- **Semi Finalist** in **Arm Design Challenge** at IIIT Bangalore   2019
- Certificate of **Excellence and Appreciation** Awarded by S.P.I.T & Dept. of EXTC   2019
- **Finalist** in **3rd Mitsubishi Electric Cup** held at NIRMA University, Ahmedabad   2018
- **3rd Position** at 11th All Gujarat Shotokan Karate Championship   2009

Patents & Publications --

- **Ingle, B.**, Rathi, R., Ambawade D., Sawant, R., **Implementation of Virtual OPC on Cloud**   2019
  TENCON 2019 IEEE Region 10 flagship International Conference, Kochi, India

- **Ingle, B.**, Jadav, R., Rathi, R., Rao, Y., **Dimension Estimation Using Image Processing**
  IEEE Sponsored **Global Conference for Advancement in Technology (GCAT),** *Banglore, India*   2019

- *System and Method for Remote Monitoring of Vital Parameters of Water Bodies*
  Indian Patent Application 201921025610, filed June 2019   Patent Pending

- *System and Method for Automation in Aquafarm using a Closed Loop System*
  Indian Patent Application 201921025602, filed June 2019   Patent Pending

- *System and Method for Predictive Aquafarming*
  Indian Patent Application 201921025621, filed June 2019   Patent Pending

Extracurriculars --

- Active Member of Fire and Security Association of India   2017 - PRESENT
- Volunteer at beach cleanups led by Mr. Afroz Shah under SEVA program   2017 - 2019
- Finalist GUJCOST 2014   2014
- **Black Belt** 10th Dan Tenshinkan Federation - Japan   2010

Declaration: I hereby declare that all the information provided here is true to the best of my knowledge and belief.

Date : August 1, 2019   Bhavin Ingle