SANKET JOSHI

1201 Indiana Avenue, Indianapolis, Indiana
+1 (317) 701 1262 ⋄ srjoshi@purdue.edu

EDUCATION

Master of Science (Msc) in Electrical and Computer Engineering Fall 2018 - Fall 2020
Purdue School of Engineering and Technology, Indianapolis, GPA: 3.57/4.00

Bachelor of Engineering in Electronics and Telecommunications Engineering August 2011 - May 2015
Pune University, GPA: 3.68/4.00

TECHNICAL SKILLS AND INTERESTS

Software Languages	C, C++, Embedded C, Python, R intermediate.
Design and Simulation Tools	COMSOL Multiphysics, MATLAB, LabVIEW, Proteus design suite, Kinetis Design Studio, Simulink, Altium designer, Dip trace, Multisim, Microsoft Access, VB.
Project Management	Microsoft SharePoint, Tableau Salesforce, Microsoft Visio.

COURSES TAKEN

Energy Conversions, Wireless Multimedia and Computing, Embedded Autonomous Systems, Computational Models and Methods, Computer Organization and Architecture, System Programming and Operating Systems, Integrated Circuits Applications.

PROJECTS

Real Time Aqua Monitoring System using K64F Aug 2018 - Dec 2018

- Implemented the system using K64F, ESP 8266 Wi-Fi module. And a DHT11 sensor. This smart anti-freeze system thus the prototype, is a miniaturized version of a temperature-based pipe freeze detection system.
- Upon attaining a pre-defined threshold temperature, heat is proactively generated in the system by increasing the temperature to a comfort point, which ensures water flow and thereby, avoids pipe freezing. The system is also expected to monitor the flow control and communicate between devices using Thread protocol (using NXP KW41z).

Startup Procedures for starting an Induction Motor: (MATLAB Simulation) Aug 2018 - Dec 2018

- In this project comparison of three different methods to reduce the inrush current during the startup procedure of a three-phase induction machine were implemented using MATLAB.
- Out of the three; Voltage/Hz is better in many perspectives discussed in this work considering the complexity, cost or its performance characteristics observed from its speed and torque profiles.
- The sole purpose of this work was to compute all the methods with its cost, use of sensors, complexity, the inrush current and speed profiles and propose which method should be preferred.

Development of a Low-Cost Nitrate detection Soil Sensor July 2014 - May 2015
Major Undergraduate project work

- The task was to design, simulate and build an electromagnetic sensor, which was used to detect excess nitrate contained in the soil. Initially, the structure was designed and tested in a simulation environment on a tool COMSOL Multiphysics with real-time boundary conditions applied as air.
- Since the available resources for nitrate detection have bulky instrument size and involve complicated working steps, the aim was to come up with a low-cost system which will serve as an alternative for in-house measurements.
- The performance of the system was observed where the sensors were tested with various soil samples mixed with a different concentration of nitrate in proportion with water, and all the sensors were further integrated with a controller. With this setup around 200 readings were recorded for analysis purpose to check the level of contamination in the soil.

Effect of Mutual Coupling on Microstrip Antenna Nov 2013 - May 2014
Minor undergraduate project work

- The task was to design and fabricate two patch rectangular shaped antennas called Microstrip antenna.The patch design was inspired merely by the textual formula borrowed from Balanis.
- The design and simulation were carried out on IE3d, an antenna designing Software.Both the simulation and experimental outcomes were compared. The effect of mutual coupling was observed to less extent, but the resonating frequencies were obtained as per designed principles.

RESEARCH PUBLICATION

Sanket Joshi, Abhjit Baviskar, S V Mapare"*Development of a Low-Cost Nitrate detection Soil Sensor*", 2017 International Conference on Wireless Communications, Signal Processing and Networking (WiSPNET) by IEEE, http://ieeexplore.ieee.org/document/8299968/
Electronic ISBN: 978-1-5090-4442-9 February 2018

Sanket Joshi, Akash Joshi, S V Mapare"*Effect of Mutual Coupling on Microstrip Antenna*", publication description Volume 49C, 2015, pages 313-318 in Procedia Computer Science and Elsevier Journal.
https://www.sciencedirect.com/science/article/pii/S187705091500767X June 2015

WORK EXPERIENCE

Teaching Assistant - ECE 20200 (Linear Circuit Analysis II) , Spring 2019
under Dr. Anusha Rao at Electrical and Computer Engineering department, IUPUI

Teaching Assistant - ECE 32100 (Electromechanical Motion devices) , Fall 2018
under Dr. Dos Santos at Electrical and Computer Engineering department, IUPUI

Executive Engineer - TATA Communications Ltd (TCTS) Pune, India June 2017 - June 2018
Service Fulfillment:

Shortlisted to head a Wholesale Process as SME and Process designer. Outlined Project Flow using Microsoft Visio, Finalized Quality parameters and helped define different KPI/SLA's parameters. Process Automation: Implemented Outlook response - employee tracking tool, and daily tasks monitoring tool using VBA.
Networking, Provisioning and Configuration management: Mar 2016 - June 2017

Voice over IP (VOIP), Unified Communication, Routing and Switching, MPLS, SDH structures and functioning, and Transmission. Worked as a Project Manager for Implementation and Fulfillment Management Team.

AWARDS AND ACCOMPLISHMENTS

- **Best Outgoing Student** of the Institute for the year 2014-15 offered by Sinhgad Institutes under University of Pune, MH for exceptional work(academically and voluntarily) throughout the year.
- Awarded a partial departmental scholarship of **USD 7000** per semester by Electrical and Computer Engineering department, IUPUI.
- Awarded a scholarship for an international conference (ICAC315) by Sinhgad Institutes.Awarded as the Best Resource person for undertaking PCB design techniques workshop, for a batch of 200 applicants at a college techfest Techtonic.
- Awarded as **the Best Resource person**, for undertaking PCB design techniques workshop, for a batch of 200 applicants at a college techfest Techtonic.

PROFESSIONAL MEMBERSHIPS

- Appointed as INTEL AI Student Ambassador, a dedicated program designed by INTEL to involve researchers in Artificial Intelligence.
- Student Membership of IEEE (Institute of Electrical and Electronics Engineers).