VINAY JOSHI

Engineer & Enthusiast

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EXPERIENCE

Teaching Assistant

NJIT

Aug 2017 – Ongoing | Newark, NJ, USA

- Teaching microprocessor programming lab (ECE 395-101) to undergraduate students

PGET

Mahindra Susten

July 2016 – July 2017 | Mumbai, India

- Led the initial design of electronic system for electric bicycle
- Successfully developed subsystems of the product
- Led the initial design of air quality monitor
- Implemented Zigbee pro based multi hop network for communication of solar plant data

Research Assistant

IIT Bombay

Aug 2013 – July 2016 | Mumbai, India

- Managed and maintained EE dept. website
- Designed new components for the EE dept website and new web portals as per the requirement

PUBLICATIONS

Conference Proceedings

- Vinay Joshi, Onkar Desai and Anupama Kowli (2017). “High Accuracy Sensor Fault Detection for Energy Management Applications”. In: *IEEE Spices*.

AWARDS

Winner of the Ideathon contest

VLSID conference 2017

Jan 2015 | Bangalore, India

- Won first prize for developing prototype for mosquito density sensing under 60 hours

Best Speaker Award

Reading group IIT Bombay

July 2016 | Mumbai, India

- Won first prize for talk on "sensor networks for solving real-life problems"

Provost award

New Jersey Institute of Technology

Aug 2017 | NJIT, NJ, USA

- Awarded provost scholarship for PhD program at the university

ABOUT

I’m an engineer deeply fascinated by capabilities of deep neural networks. I’m very much intrigued by future of self-driving cars and looking forward to work on involved technologies. I’m actively looking for summer internship in 2018 in machine learning.

TECHNOLOGIES

C, C++, Python, Java(Android) | Git | Neural networks | Control system | Tensorflow | Embedded system | OS: Ubuntu, Windows | Matlab | Anaconda, Jupyter | Android studio

LANGUAGES

Hindi
English
Marathi

EDUCATION

Ph.D. in Electrical and Computer Engineering

New Jersey Institute of Technology

Aug 2017 – Ongoing

M.Tech. in Electrical Engineering

Indian Institute of Technology Bombay

Aug 2013 – July 2016

B.E. in Electronics and Telecommunication

University of Pune

Aug 2009 – June 2013

REFEREES

Prof. Bipin Rajendran
@ bipin@njit.edu
327 ECEC, NJIT

Prof. Anupama Kowli
@ anu@ee.iitb.ac.in
231 B, EE, IITB

PAST PROJECTS

Fault detection in wireless sensor network data

M.Tech. Thesis

Jul 2016 IIT Bombay

- Developed neural network based model for identifying faults in the sensor data in real time **using data from single sensor alone**
- **Statistical feature set** was developed for training the network
- Neural network achieved about **98% accuracy** on the test data

Data management platform for wireless sensor network in IIT Bombay

M.Tech. work

Jul 2015 IIT Bombay

- Developed following components and connected them to allow collection and access of data for research in IIT Bombay
- **Beagle bone black based gateway** for pushing data from **ZigBee PAN** to server over Ethernet
- **Ubuntu based server** system using Dell edge T20 and used LAMP stack for collection and access data over **PHP REST apis**
- **Website and Android app** for real-time visualization of data and monitoring sensor network

Bio-inspired wireless control of ceiling fan

M.Tech. course work

Nov 2015 IIT Bombay

- Implemented motor **control of ceiling fan using Android app**
- Fan speed was programmed follow **average healthy human body profile during sleep**
- **Android app based Bluetooth communication** with motor control circuitry was implemented

Automated ordering system for restaurant

B.E. Thesis

Jun 2013 University of Pune

- Developed AVR micro-controller based **touchscreen enabled wireless(Zigbee) device**
- LCD devices that talk to central device in a **star topology**
- System was tested with two customer modules and one chef module

Android app design for a regional school

Independent work

Jun 2015 Diglur, MH, India

- Developed an android application for a regional school for parents to keep track of their wards
- Two versions of the app were developed, for teachers to upload students' data and for parents to access information of their ward

RELEVANT COURSES

Neural networks and deep learning

Andrew Ng, Coursera

Sept 2017

Machine learning

Andrew Ng, Coursera

Dec 2014

Applied Linear Algebra

IIT Bombay

Dec 2013

Control optimization

IIT Bombay

May 2014

Advanced computing for electrical engineers

IIT Bombay

May 2015

HARDWARE

- Beaglebone black
- Raspberry pi
- Intel edison

INTERESTS

- Playing volleyball, chess
- Swimming