Curriculum Vitae

Applying for Masters in CS, fall'18

Name: **T Sai Ruthvik**

Website: https://tsairuthvik.github.io

Course: B.E. (Hons.), Electronics & Instrumentation

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EDUCATION

- BITS Pilani — Goa, India
  B.E. (Hons.), Electronics & Instrumentation — *2013-2017*
- FIITJEE Junior College — Hyderabad, India
  12th Class Percentage: 89.1 — *2011 – 2012*
- D.A.V Public School, Safilguda — Hyderabad, India
  10th Class c.g.p.a (10): 9.8 — *2010*

SKILLS

- ARDUINO, CADENCE, PSPICE, EAGLE, MATLAB, LabVIEW, openGLES
- Visual Studio(for Web and Mobile App Development), Adobe PhotoShop, Unity, Android Studio(Android App Development)

RELEVANT COURSES

- Technical Courses
    1. Software Development for Portable devices , Mobile Telecom Networks, Telecom Switching Systems and Networks, Data Communication Networks
    2. Signals and Systems, Control Systems
    3. Digital Design, Microprocessors and interfacing
    4. Electronic Devices, Microelectronics, Analog and Digital VLSI Design
    5. Electrical machines, Power electronics, Analog electronics
    6. Electronic Instruments Instrumentation Technology, Industrial Instrumentation

EXPERIENCE

- CS Department BITS Goa — Goa, India
  Teaching Assistant — *JAN 2017 – MAY 2017*
    o Taught the basics of Arduino Programming in the Software Development for Portable Devices course Taught by Dr. Sreejith V
    o Assisted Dr. Sreejith with marking, attendance marking and other miscellaneous projects during labs

- ISEP, France   Paris, France
  Research Intern   *JUL 2016 – DEC 2016*
  - Designed the Visible Light Communication(VLC) transmitter and Receiver in Eagle software and then printed it on PCB boards(github link)
  - Tested the VLC transmitter and receiver boards on ARDUINO, Beagle bone black Platforms(github link)
  - Worked under Dr. Xun Zhang

PAPER PUBLICATIONS AND POSTERS

- Presented the paper titled "A Portable Real Time ECG Device for Arrhythmia detection using Raspberry Pi" in MOBIHEALTH Conference 2016 held in Milan, Italy.
- Paper titled "EEG-Based Classification of Bilingual Unspoken Speech Using ANN" accepted at the 39th Annual International Conference of the IEEE Engineering in Medicine and Biology Society, Jeju Island, South Korea.
- Also presented a poster on "A Portable Real Time ECG Device for Arrhythmia detection using Raspberry Pi" in MOBIHEALTH conference 2016.
- Presented a poster on "EEG-Based Classification of Bilingual Unspoken Speech Using ANN" in AttLis International Conference 2017.

PROJECTS

- Game Object Control using Blink Data(video)
  - Created an Android App in which the rotation of the cube can be changed via a forcible blink. The App was developed using the Unity Editor and the blink data was received from the NeuroSky EEG Headset.
  - Project was done remotely under the supervision of Dr. Veeky Baths

- S-MART
  - Project aims to integrate mobile based augmented reality app with indoor localization in a mart like Walmart.
  - Developed an Augmented Reality app with Object file(arrows) popping in the camera view for the direction between two NFC tags or QR codes, the NFC tags/QR codes contain the information about the location of respective products.
  - Dijkstra's algorithm was used for routing and re-routing has also been implemented in case the user goes the wrong path.
  - Project was done under the supervision of Dr. Sreejith V

- Arduino Audio Input using Stethoscope
  - Successfully transferred real time audio data from the stethoscope to the mobile in spreadsheets using Arduino YUN
  - Implemented Temboo API for google Spreadsheets for data storage

- Wireless Heart Rate Sensor(github link)
    - Designed and assembled the hardware of the prototype(video)
    - Established a wireless connection between Raspberry Pi and Mobile Device
    - Worked under Dr. Veeky Baths

- Smart Blind Navigation System(github link)
    - Designed a prototype for easy navigation of blind people, used ARDUINO with a vibration motor and a buzzer for alerting if any obstacle is close by.
    - Worked under Dr. Sreejith V

- Bluetooth connection on Arduino
    - Successfully connected HC 06 Bluetooth Module on Arduino Uno to Computer
    - Established connection between two Arduinos with the help of HC 05 and HC 06 Bluetooth modules using Master and slave concept(github link)
    - Successfully connected HC 06 Bluetooth Module on Arduino UNO to mobile device

- Joint Mode Selection and Resource Allocation for Device-to-Device Communications(github link)
    - Developed low-complexity algorithms for power control, joint mode selection and channel assignment
    - software used- MATLAB

ACHIEVEMENTS

- Came 3rd in EMBITION(an ARDUINO event) during QUARK 2016(the technical fest of BITS-Pilani Goa Campus)
- Was a member of the winning team in cricket during SPREE 2013(the sports fest of BITS-Pilani Goa Campus)
- Was a team member of the top ranked team(a team of 6 members) in Product and Brand Management course

POSITION OF RESPONSIBILITY

- Volunteer   Goa, India
  4th International AttLis Workshop   *MAR 2017*
- Mentor at TIP(Technology Incubator Programme)   Goa, India
  Mentoring for the project "Wireless Heart Rate Sensor"   *since FEB 2016*
- Member of Kricket Klub
  Goa, India
  The Cricket Team of BITS Goa   *since NOV 2013*

EXTRA CURRICULAR ACTIVITIES

- Interests-Wireless Communication, Web Development, Photoshop, Developing Augmented Reality Apps and Games
- Hobbies-Playing Cricket, Tennis and Football