

Vijaykumar Jatti

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» Objective

Seeking a challenging position to utilize my skills and abilities in area of Teaching and Education that offers a professional growth while being resourceful, innovative and flexible.

» Education

- **Santa Clara University**, Santa Clara, CA *December 2015*
MS Computer Engineering. **GPA: 3.65 out of 4**
Reference Professor: Dr. Silvia Figueira
 - **Gogte Institute of Technology**, Belgaum Karnataka, IN *June 2013*
Bachelors in Computer Science and Engineering. **Aggregate: 64%**
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» Work Experience

- Graduate Research Assistant**, Santa Clara University, CA *January 2016-March, 2019*
 - Simulating packet traffic in Ad-Hoc network using Raspberry pi's for Mobile mesh network Project .
 - Creating Mobile Ad-Hoc network using OLSR protocols, Access Control Lists.
 - Setting up Amazon EC2 server for ARM® Mbed Devices and collect all sensor information connected to the device.
 - Conducted Java, C, Web development courses for Undergraduate and graduate students.
 - **Crisis evacuation using Wireless Sensor Network (Java)**
Developed simulation on Mobile Agents capable of communicating with a sensor network embedded into a building in case of a crisis evacuation.
- IoT Tech Intern - Broadcom**, Sunnyvale, CA *March, 2015-October, 2015*
 - Working on Broadcom's WICED SDK.
 - Android application development for WICED enabled devices.
- Graduate Teaching Assistant**, Santa Clara University, CA *May 2014-February 2015*
 - Conducted and organized training activities for students on Android and tested VoIP application for Dew Mobility using Selenium.
 - Published three Android applications in Play store under Dew Mobility.
 - <https://play.google.com/store/apps/details?id=com.scribble.mnotes>
 - <https://play.google.com/store/apps/details?id=com.examp.meetingsms>
 - <https://play.google.com/store/apps/details?id=com.vijay.mnotes>
- Tutor, Turning Point Computers** Bijapur, IN *July 2013-December 2013*
 - Designed course material for C and Java Classes and tutored around 30 sophomore engineering students

» Tech Skills

Languages : C, C++, Java, Python (Beginner)
Mobile Platforms : Native Android, Tizen (Beginner)
Database : MySQL, Oracle 11g, SQLite, Microsoft Server 2008 R2
Tools : Wireshark, Packet Tracer, Network Simulator, GitHub, Qt (Beginner)
Web Technology : HTML5, CSS, Javascript, JQuery, Twitter Bootstrap, Amazon EC2

» Achievements (2013-2015)

- Won First prize in IoT Bluetooth Hackathon -2015 for developing “BluePow Barrier” using Anaren WICED board.
 - One of the top 8 finalists in Vodafone Americas foundation for seventh Annual Wireless Innovation project-2015 for Wireless Mobile mesh Network.
 - Won Most Innovative Idea Award in IoT World Hackathon-2014 for “Voice of the Un-heard” IoT application.
 - Participated and represented “Anaren Inc” in Stanford University, IoT HomeHack and created “Smart MedBox” IoT application.
 - IBM certified associate Developer for WebSphere Software 6.0.
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» C Libraries implemented for Embedded Systems

- Implemented LibWebSocket C Library
 - Implemented micro ECC, C library: ECDH and ECDSA for 8-bit, 32-bit, and 64-bit processors.
 - Jansson C library for JSON parsing.
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» Projects Description

3WDroid

September 2014

Creation of interactive mesh network of the cell phones using Active and passive nodes for connection and transmission of data and voice packets. Utilization of Raspberry pi for the nodes resulting in reliable and economic network and low cost android cell phones for user interaction.

The static nodes would follow the model of a regular cellular network that we can call “tower nodes”. Each tower node would need to know to which other 2 unique tower nodes to attach (OLSR works by attaching to 2 neighbors). This would be an enhancement to the OLSR protocol that must understand whether the node is a user node or a tower node. This way, once a user node finds a tower node, the packet is guaranteed to be propagated to its final destination by routing from tower to tower node.

By coercing the Multi-Point_Relay nodes which is a key concept in the OLSR routing algorithm to follow a “managed network” concept, the network of “tower nodes” or MPR nodes will become much more reliable.

BluePow Barrier – IoT Project

April 2015

Winner of Bluetooth World Hack - 2015

BluePow Barrier is an IoT Home automation project which can convert any electrical equipment to a Smart equipment. By making use of this product we can control any equipment with our cellphone. While designing this, we kept in a scenario to monitor the amount of time, a child can watch TV. After a defined time, TV can be automatically switched off and can be notified to the guardian/mentor.

DriveSafe – IoT Project

May 2016

An IoT project done in IoT World Hackathon – Mountain View, and won the best Innovative project by using Anaren(R) Development Kit. The project focuses on Auto silent feature of the cellphone while driving. It also makes use of the proximity sensor to calculate the distance between the vehicle and constantly monitors the speed of the Vehicle.

Smart MedBox – IoT Project

Feb 2017

Smart IoT project done in Stanford University in HomeHack-2015. This project is done by keeping elderly patients in mind who forget to take their medicines on time. This smart MedBox keeps an Alarm at programmed time and sends the notification to the guardian if the medicine is not taken on time. To eliminate the confusion for elders for which day's medicine has to be taken, the box is designed with different color LED's which glows for particular day. Box also has the functionality to alarm with different tones.