

RAMESH NADAVATI

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Interests

Big Data, Data Mining, Machine Learning, Internet of Things (IoT).

Education

- June 2016 **Master of Science**, Computer Science and Information System
Honors in Computer Science and Information System
Minor in Health care
University of Michigan; Flint
Advisor: Dr. Murali Mani
- April 2014 **Bachelor of Technology**, Electrical and Electronic Engineering
SITE, Jawaharlal Nehru Technological University Anantapur
Honors in Electrical and Electronics
Minor in Mathematics
Advisor: Late prof. G. Sanjanna, Prof. A. Sandya Sri

Experience

- Fall 2011-2013 **Shree college**, Andhra Pradesh, India
Employee | Lab Administrator (Linux/Unix, Network, System Administrator)
My responsibilities were setting up the network, maintaining and expanding the network, user administration, verifying the peripherals, quick repairing hardware failures, monitor system performance, created backup and recovery policy and monitored network communications etc... Installing and Configuring Configuration management tools like Zenoss and Nagios etc.
- Summer 2014 **Microsoft Research | Chennai, India | Internship.**
Attended Summer School on topics such as statistical physics methods in coding/ Information theory. Discussed and learned [coding theory](#), graphical models and message-passing iterative algorithms, Gibbs partition function, free energy function, [Mean field approximation](#), Bethe approximation. [Boltzmann distribution](#), Spin glass models, Phase diagrams, Curie wise models, Random energy models and Mesoscopic perspective on network dynamics. Learned and performed stochastic geometry for wireless network. Secured 2nd rank among 90 Summer School participants. Learned and performed stochastic geometry for wireless networks.
- June-Oct 2015 **University of Michigan | Flint, MI | Internship.**
Worked as a desktop technician, I was helping students and faculty by providing services like installing, updating, troubleshooting all kinds of software and Operating Systems (OS). Answering customer phone calls and resolving computer problems

Summer 2013 Microsoft Research | Chennai, India | Internship.

Attended a summer school on topics such as Random Matrix theory and wireless networks. Learned and performed stochastic geometry for wireless networks. I have also done research in wireless networks.

Summer 2012 Rayalaseema Thermal Power Plant, AP, India

Internship | Junior Network and System administrator, Substation Control Engineer.

- My responsibilities were operating automated or computerized control systems, stationary engines and auxiliary equipment such as reactors, boilers, turbines, generators, pumps and other equipment to generate electrical power. Start up and shut down plant equipment, control switching operations, regulating water levels and communicating with other operators to regulate and co-ordinate transmission loads, frequency and line voltages. Monitoring plant equipment, computer terminal, switches, valves, gauges, meters etc... Analyzing and recording instrument reading, equipment malfunctions and maintaining accurate technical reports. Also performing the network and system admin roles.

2014-2015 QuietGrowth | Bangalore India | Web Developer.

- Based on clients guidelines, worked on designing, coding and modifying websites, from layout to function. Strive to create visually appealing sites that feature user friendly design and clear navigation. Deep expertise and hands on experience with web applications and programming languages such as HTML, CSS, PHP, Bootstrap, JavaScript, XML and API's. Hands on web design experience with UI, REST, and SOAP. Sample web links- [Website1](#), [Website2](#), [Website3](#).

2013-2014 Sector Soft | Hyderabad, India | Software Engineer(Internship)

Played energetic role in analyzing information, applying coding skills, software design and debugging, software testing and documentation, problem solving, teamwork, software development fundamental and process, Demonstrating solutions by developing documentations, coding, flowcharts, layouts and diagrams. Hands on experience with C, C++, Python, Java. Excellent problem solving and debugging skills

Fall 2012 S.V. University College of Engineering, AP, India

Research Intern | Databases and Algorithms | Guide: Prof. G.Sanjanna

- Worked on Hand gestures in touch based system. I have done research in Neural networks and have presented many statistical approaches to tackle this problem and achieved 83% accuracy. Worked as a "Database engineer" and my role was to update student details in database and creating portfolios to faculty and staff members in the university.

Research

– 2014 Bachelor's Thesis, Dc-Distribution Application | Guide: Prof. M. Purushotham

- In a dc-distribution system, a bidirectional inverter is required to control the power flow between dc bus and ac grid, and to regulate the dc bus to a certain range of voltages. A droop regulation mechanism is required, according to the inverter inductor current levels to reduce capacitor size, balance power flow, and accommodate load variation is proposed. Since the PV array voltage can vary from 0 to 600V, especially with thin-film PV panels, the MPPT topology is formed with buck and boost converters to operate at the dc-bus voltage around 380V.

Talks and Seminars

- May 2016 **Big Data for small formers**
UM; Flint
- Sep 2015 **Table Functions in Oracle**
UM; Flint
- May 2015 **Machine Learning Concepts**
UM; Flint
- Jul 2014 **Sketch-based algorithms in Machine Learning**
UM; Flint
- May 2013 **Nature of Solar energy and wind energy**
Site Tirupathi
- Nov 2013 **Cloud Computing**
S.V. University Tirupathi.

Teaching

- Winter 2016 Tutor: Database Design, Unix, Visual Basic, Oracle Databases DBMS, SQL, PLSQL, Algorithms, Python, Java Basics.
- Graduate Teaching Assistant at tutor lab

Honors and Awards

- Achieved 2nd rank in Ramanujan Mathematics and competitive test among all the Departments in the university.
- Received a medal in 'robotics research' held by research committee 2014 at SITE college.
- Recipient of the Research Scholarship under SVU Funding's, in 2012
- Secured 2nd position in the State Level Regional Mathematics Test. Recognized and Certified as among 0.1% students, in the Math's, Physics, Chemistry in 2006.
- Received an award in "two days Robotic Challenge" for the successful completion of coding for "street follower robot using hand controllers".
- Received multiple awards for best dance performances.
- Received best outgoing student award for excellence in academics and cultural activities.
- Active member of Big Data group at University of Michigan Flint where we discuss and present current advancement in the field of Hadoop MapReduce and Big Data Mining.

Projects <https://github.com/nadavatiramesh>

- June 2016 **SAE Baja Team:** University of Michigan; Flint.
Designed and Developed vehicle controlled systems in the Baja car which is going to participate in multiple competitions in the years 2016-17. Lead a team of 4 people.
- Winter 2015 **Table Functions in Oracle and their performances**
Examined the performance of table functions (TF) in oracle. Gave presentation on advantages of pipelined and parallel methods in oracle. I wrote programming code using SQL, MYSQL, and PLSQL. Data processing using “pipelined and parallel TF” was faster than data processing with “un pipelined and un parallel TF”, achieved 90% accuracy and faster performance.
- Winter 2016 **Creating connection between Java and Database.**
I wrote programming code in Java and I have created tables in DBMS. Also, I wrote programming code to set server o/p and to create connection to my database account. I executed the task and successfully achieved as much as 86% accuracy and outputs were out in Eclipse.
- Fall 2015 **Machine learning concepts in recognition of Face and Iris | IR | Guide:Dr. M.Farmer**
Worked on machine learning concepts related to Biometric recognition, for this project reviewed and discussed more than 30 articles and understood some important concepts. The final report was submitted, including four supervised Machine Learning algorithms like ‘[support vector machine](#)’, ‘[Fuzzy expert system](#)’, ‘[Gaussian mixture model](#)’, ‘[Artificial Neural Network](#)’ in [biometrics](#) research. Finally examined the dataset and have observed as much as 73% of accuracy.
- Spring 2015 **Texture Synthesis by Non-Parametric Sampling**
Modelled texture as a Markov Random Field where the texture synthesis process grows a new image outward from an initial point, one pixel at a mean time. Achieved the performance accuracy of 83%.
- Winter 2016 **Your Face Tells Everything: An Analysis of Human Emotions with internet and without internet:**
From this study, I tried to analysis and provide the proof of usage of emoticons according to the age factor. To compute the results, I have collected the data from 63 users around the globe. The final results were intermediate, but 3rd age group people largely using the most emoticons for different things/meanings.

Leadership Positions

- 2014 **Head of Mathematics Forum and Department C R, SITE Tirupathi**
Part of the Department Undergraduate Committee; there we deal the unsolved and complicated problems, R&D Dept.; I lead a team of 23 mentors and the Dept. [96 students]
- 2014 **Conducted workshops, speeches and events, SITE Tirupathi**
Conducted workshops related to robotics and embedded engineering etc... Conducted many events related to academics, meet & great functions etc.
Responsible for taking care of 7 freshmen students focusing on their academic development and leading the Anti Ragging Squad in the university.

– 2016

Member at Indian student ambassador's, U of M USA

My responsibilities were interacting with freshers and junior students. Helping them in finding houses for rent, explaining the rules and regulations in the United States. Taking them to grocery stores etc.

Technical Skill Set

Programming Languages : C, Python, Java, C++

Statistical Computing : Matlab, Simulink

Basic Administration : Linux, Unix, System admin., Network admin., VMware Horizon.

Miscellaneous : Oracle DB, PLSQL, HTML, CSS, Java script, PHP, L^ATEX, prolog, Expert in MS Office.

Teaching Asst./Tutor : Database Design, C, C++, Unix, Visual Basic, Oracle Databases, DBMS, PLSQL, Algorithms, Python, Basic Java and Strategic planning.

References

** Contact details are available upon request.*

Prof. Dr. Michael Farmer

U of M; Flint, USA
Computer Science HOD

Prof. Dr. Murali Mani

U of M; Flint, USA
Computer Science Program Associate

Prof. A. Sandyasri

SITE Tirupathi
BSE Engineering

Prof. K.Ramakrishna

SITE Tirupathi
BSE Engineering HOD