

ACADEMIC QUALIFICATIONS

Year	Degree/Certificate	Institute/ School	(CPI/%)
Jan 2017 - Present	MS (by Research) - Power Engineering - EE	Indian Institute of Technology – Kanpur	9.5 / 10
2011 - 2015	B.E. Electrical and Electronics Engg.	Velammal Engineering College, Anna University	9.0 / 10
2011	Class XII: Tamilnadu Higher Secondary	St. John's Matric. Higher Sec. School - Chennai	94.0 %
2009	Class X: Matriculation Board	St. John's Matric. Higher Sec. School - Chennai	93.4 %

PROFESSIONAL EXPERIENCE

Experience	Organization	Designation	Specialization
Nov 2017 - Dec 2017	National Institute of Wind Energy, Chennai	Intern	Wind Power Forecasting and Cyber Security.
Jun 2015 - Dec 2016	EmbedUR Systems, Chennai	Engineer	Embedded Systems – Wireless Networks
Feb 2015 - May 2015	EmbedUR Systems, Chennai	Project Intern	Wired and Wireless Networks

ACHIEVEMENTS

- Recipient of **GEM (Going Extra Mile - Best Employee award)** in April 2016 from EmbedUR systems
- Secured **University Rank 17 among 14862 EEE students graduated at Anna University, Chennai** in 2015
- Awarded the '**Best Outgoing Student**' of the batch 2011-2015 among 900 graduate students
- Obtained the '**Certificate of Proficiency**' from St. John's for securing Rank 1 in academics **consecutively for 13 years** (1998-2011)
- Attained **Rank-3 in National Science Talent Search Examination** conducted by Unified Council in January 2011
- Won **First Place in National Level Abacus and Mental Arithmetic Competition** competing more than 1000 State level winners.

PROFESSIONAL PROJECTS

Wind Power Forecasting and Cyber Security Overview-Intern (National Institute of Wind Energy, Chennai) (Nov'17 - Dec'17)

- Implemented **hybrid Time-Series based aggregation method of Wind Power Forecasting** using past 24-hour real-time data and NWP forecasts to predict the day-ahead Wind Power Generation with 20% better forecasting accuracy
- Surveyed the various Wind Power Forecasting Techniques and **provided a case-study on implementing the various techniques applicable for NIWE** based on the data availability and provided vulnerability analysis of Wind Energy Conservation Systems
- Attended special International Training Course on "Wind Turbine Technology and applications" at NIWE

Development and Deployment of Comcast-Arris Outdoor Gateway (EmbedUR Systems, Chennai) (Feb'15 - Dec'16)

- Active contributor and critical resource personnel in a 6-member team focussing on Hotspot, GRE Tunnelling features of Comcast-Arris OG1600 cable modems and providing support to Onsite Team on Field deployment
- Hands on in QCA Wi-Fi chipsets on Arris Cable modems and extracted industrial knowledge in Content Delivery Networks, Networking protocols, Wired and Wireless networking focussing on development of Optimized Roaming in cable modems

ACADEMIC RESEARCH PROJECTS

Robust Distribution System State Estimation – Master's Thesis (Supervisor – Dr. Saikat Chakrabarti and Dr. Ketan Rajawat) (Ongoing)

- Development of Distribution State Estimator that is **robust to cyber attacks and time skewness of hybrid measurement devices**.
- Includes Expectation-maximization based delay compensation for hybrid non-synchronized measurements and Projection statistics based bad-data detection to aid **Cyber Security of Smart Grid Distribution Systems**.
- Interfaced hybrid measurement devices in **OPAL-RT** to simulate real-time measurements. Also, used **Python APIs to interface the simulator** from the external device, with protocol conversions such as DNP, IEC 61850, IEC 60870 and IEEE C37.118 and DLMS.

Maglev Wind Turbine for Isolated Load Systems – Bachelor's Thesis (Supervisor – Dr. Senthil Kumar Ajithan) (Jun'14 - Mar'15)

- Developed a self-made **prototype of real-time Vertical Axis Wind Turbine incorporated with magnetic levitation** to reduce frictional loss thereby improving the efficiency of energy generation to satisfy increasing Power crisis

WiTricity – Prototype of Wireless Power Transfer (September'13)

- Demonstrated the **application of WiTricity in Wireless Charging, Lighting, and other appliances** with the self-designed domestic **mini-inverter** and to showcase the need for mobility in modernised Power Systems.
- Secured **1st place in Technical Paper presentation** of the project at National level Technical Symposium organised by **Vellore Institute of Technology(VIT)**

Automatic Temperature Controlled Fan (October'09)

- Design a completely self-made automatic temperature-controlled fan for industrial and domestic applications.
- Displayed the prototype in State Level Project Competition organised by **Government of Tamilnadu** and won **Innovative self-developed project award**.

PUBLICATIONS

SanthoshKumar C, Ketan Rajawat, Saikat Chakrabarti, Bikash Pal, "Robust Distribution System State Estimation with Hybrid SCADA and AMI Measurements," in *IEEE Transactions on Power Systems* (submitted), Oct. 2018.

POSITIONS OF RESPONSIBILITY

Overall Placement Coordinator		(Students' Placement Office (SPO), IIT Kanpur)	<i>April'18 - Till Date</i>
Leadership	<ul style="list-style-type: none"> Led a 4-tier team of 100 members to procure Internship and Placement opportunities for 1200 students and reaching out to more than 200 companies 		
Initiative	<ul style="list-style-type: none"> Promoted networking with Alumni to bring new firms and improve campus placements opportunities Nourished the PG students' participation in SPO through dedicated preparation and interactive sessions 		
Core Team Member		(Counselling Service, IIT Kanpur)	<i>April'17 - April'18</i>
Leadership	<ul style="list-style-type: none"> Coordinated with a 3-tier team of Counsellors, Psychiatrists, Core Team and 120+ student members to provide academic, financial and social assistance to 1500 new post-graduate students and help them get accustomed to the campus Led the Finance section of Counselling Service and maintained accounts of Orientation, Food fest and other events organised by Counselling Service during the tenure 		
Initiative	<ul style="list-style-type: none"> Conducted a Food Festival during Diwali-2017 in view to improve students' interaction and promote friendly relationship. It includes coordinating with 25 participants and managing crowd of around 500 people Revamped and successfully implemented Student Guide (Buddy) program for Y17 Post Graduate students 		
General Secretary and Academic Coordinator		(Velammal Engg College, Anna University, Chennai)	<i>April'14 - May'15</i>
Initiative	<ul style="list-style-type: none"> Streamlined the activities of VEESA and organised various academic events such as SURGE 2k15, National Conferences, Project Expo, etc. which eased the conduction of VEESA events in the forthcoming years Successfully led the National Technical symposium SURGE 2k15 with over 1000 student participants 		

EXTRACURRICULARS

Technical	<ul style="list-style-type: none"> Secured 1st place in the event Contraptions conducted by Velammal Institute of Technology - Chennai in September 2013 Won 2nd place in a technical paper presentation titled 'Future of Electrical Power Transmission' at National Level Technical Symposium organised by Dhanalakshmi College of Engineering – Chennai in September 2013 Performed in the Mind Blogging Event organized by Computer Society of India in 2013 Volunteered 7th International ELTAI conference held at Velammal Engineering College- Chennai in July 2012 Attended in National Conference on Polymers and Composites (PCMED -2012) at Chennai in February 2012 Member of Junior Red Cross in School Persuaded Abacus and Vedic Mathematics to improve mental skills and concentration Secured prizes in Quiz competitions and Elocution Contest held at Anna University, Sathyabama University, NIIT, Vikatan media, HDFC Bank and various other Zonal Level Competitions. Active student Member of IEEE, IEEE-PES, IEEE-PELS, IEEE-WIE
Social	<ul style="list-style-type: none"> Campaigned for conservation of social and wild-life eco-system through week-end camps, nature walks, signature boards in Jim Corbet All India Environment Awareness Programme held at Chennai Volunteered in BHUMI to impart value education to the economically weaker students of the society

SKILLS AND CERTIFICATIONS

Skills	C, C++, Python, MATLAB, HYPERSIM, RSCAD, MS Office, LaTeX, Power World Simulator, Wireshark, Git, HTML
Industrial Visit and Training	<ul style="list-style-type: none"> Industrial Visit to 400kV Panki Substation-Kanpur, North Chennai Thermal Power Station, Alamathi Substation-Chennai and Korattur Substation-Chennai Undergone In-plant training at 'Integral Coach Factory (ICF) - Chennai' in June 2013 and at 'Wheels India limited- Chennai' in December 2012
Certifications	<ul style="list-style-type: none"> Cyber Security of Substation Control and Diagnostic Systems and System Fundamentals for Cyber Security from IEEE Educational Activities in June 2017 Energy 101 from edX - University of Texas System, Austin in December 2013 Circuits and Electronics from edX - Massachusetts Institute of Technology, Cambridge in January 2013 Business English Certificate (BEC – Prelims) from British Council with a grade of Pass with merit
Teaching Assistance	<ul style="list-style-type: none"> Digital Circuits and Micro Processor Laboratory (EE 381A) Electronic Circuit Laboratory (EE 380A)
Relevant Coursework	<ul style="list-style-type: none"> PG: HVDC and FACTS, Advanced Protective Relaying, Synchrophasor Technology and its applications, Electric Power System O&M under Restructured Environment UG: Power System Analysis, Power Electronics, Power System Operation and Control, Control Systems, Communication Engineering, Power Plant Engineering, Transmission and Distribution, Protection and Switchgear, High Voltage Engineering, Electrical Machines, Power Quality, Microprocessor and Microcontroller, Measurement and Instrumentation, Solid State Drives, Computer Networks, Data Structures and Algorithm, Numerical Methods, Objected Oriented Programming, Biomedical Instrumentation, Principles of Management

PERSONAL DETAILS

Date of Birth	1st December 1993
Father's Name	Chandramouli V
Address	Plot no: 8, Door no: 6, 3rd cross street, Lakshmi Nagar, Porur, Chennai, Tamilnadu - 600116