

## JAVALKAR SANDEEP RAO

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### OBJECTIVE

- As a prospective Ph.D. candidate, I aspire to work on innovative research projects. My career goal is to become a leading expert and professor, making significant contributions to the field.

### Areas of Knowledge

- Power Systems and Automation
- Electrical and Electronics Engineering
- Computer Science
- Economics

### RESEARCH EXPERIENCE

- **M.Tech. Project**– Designing And Simulation Of Hybrid DC-DC Boost Converter For A Fuel Cell System.  
**Summary:** Successfully designed and simulated a hybrid DC-DC boost converter for a fuel cell system, incorporating advanced control algorithms to optimize power conversion efficiency and enhance the overall system's performance. This involved seamless integration of the converter into the fuel cell system, which ultimately resulted in remarkable improvements in energy conversion and the system's overall efficiency.
- **B.Tech. Project**- Plugging And Speed Reversal Of Slip-Ring Motor Using PLC.  
**Summary:** Successfully designed a reliable system for the smooth control of a slip-ring motor using Programmable Logic Controllers (PLCs). This involved extensive research, hardware integration, and PLC programming to achieve smooth motor plugging, starting, controlled braking, and precise speed reversal.

### PUBLICATIONS

- Published a paper entitled “Designing and Simulation of Hybrid DC-DC Boost Converter for a Fuel Cell System” in the Journal of Emerging Technologies and Innovative Research.

### PRESENTATIONS

- Pine Needle-Based Renewable Power Generation.
- Harnessing Solar Energy Along India's Canals: Solar Canals and Micro Hydrokinetics Integration.
- Efficiency and Performance: Hybrid Boost Converter Simulation for Fuel Cells Applications.

### EDUCATION

- B.Tech. + M.Tech. Integrated program in Electrical & Electronics Engineering at Andhra University College of Engineering, Visakhapatnam, India.
  - a) M.Tech.: Sep 2019- Nov 2022,  
Specialization: Power Systems and Automation,  
Grade: 7.67/10 CGPA
  - b) B.Tech.: Jul 2015- Jan 2022,  
Specialization: Electrical and Electronics Engineering,  
Grade: 6.69 /10 CGPA

## **SKILLS**

- Proficient in programming languages including Python, HTML, CSS, JavaScript, Bootstrap, Node.js and SQL.
- Spreadsheet, Data Cleansing, Data Analysis, and Data Visualisation.
- Proficient in simulation tools like MATLAB.
- Solid foundation in fundamental principles of Power and Energy Systems, Operation Research and sustainable engineering.
- Possess a firm grasp of software such as Microsoft Office, and Tableau.

## **CERTIFICATIONS**

- Google Data Analytics Professional Certificate (Coursera)
- Python for Everybody Specialization (Coursera)
- Professional Certificate in Computer Science for Python Programming (HarvardX: CS50) on edX
- Junior Software Developer Course with Grade A+ from Career Labs Technologies
- Meta Front-End Developer Professional Certificate (Coursera)
- Certificate Course in First Aid (CFAID) from Indira Gandhi National Open University (IGNOU)
- Certificate course in Computer Office Automation under the State Board of Technical & Training
- Participated in a program under APSSDC - SIEMENS
- Summer course on 'Power Electronics' at the CITD
- NPTEL online certification courses in Electronics Enclosure Thermal Issues and Electrical Machines – 1
- Workshop on Intellectual Property Rights: Challenges and Opportunities for Start-ups

## **ENGLISH LANGUAGE PROFICIENCY SCORES**

- TOEFL iBT test score – 90,  
Reading–24                      Listening–26  
Speaking–22                      Writing–18
- British Council EnglishScore Core Skills test – CEFR C1 Advanced,  
Core Skills Test– 586  
Grammar- 553                      Reading- 591  
Vocabulary- 587                      Listening- 599

## **EXTRACURRICULAR ACTIVITIES**

- Volunteered in the coordination of on-campus blood donation camps and actively contributed by donating blood multiple times.
- Actively participated in several university events and initiatives.
- Participated in many running and chess tournaments.