PRABAKAR S

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OBJECTIVE

"To be a cause of change for the betterment of Society"

EDUCATION

Examination	University	Institute	Year	CPI / %
Postgraduate Specialization: M.Tech-Technology & Development, CTARA				
	IIT Bombay	IIT Bombay	2016	8.36
Undergraduate Specialization: B.E.-Mechanical Engineering				
	Anna University, Chennai	EBET Group of Institutions	2014	8.67
Intermediate/+2	State Board, Tamil Nadu	Vimala Matriculation Hr. Sec. School	2010	89.58
Matriculation	State Board of Matriculation, Tamil Nadu	Vimala Matriculation School	2008	87.00

AREA OF INTEREST:

- Machine Learning
- Data Science
- Sustainable Development

TECHNICAL SKILLS:

Programming: Python, R and Matlab.

Tools: SWAT, QGIS, EPANET.

Design Software: AutoCAD, SOLIDWORKS (Design & Flow Simulation).

PROJECTS

Master's Thesis: *Water Quality Monitoring and Modelling for semi-urban systems* (Part of Obama-Singh Initiative with UC Berkeley), Guided by Prof. Bakul Rao, IIT Bombay [*July'15-June'16*]

- To understand the water quality issues in the drinking water cycle as well as the sanitary cycle in semi-urban systems.
- Water distribution and sanitary cycles was analyzed and a model was created using SWAT model and a monitoring program was designed.
- Both the water quality model and the monitoring program requires modifications based on the further studies.

Field Stay Project: *Design of Environmental Services for Rural Areas, Guided* by Prof. Bakul Rao, IIT Bombay [*May'15-July'15*]

- To design environmental services such as water supply scheme, sanitation, roads and solid waste management for Junoni village in Osmanabad, Maharashtra.
- Designed a water supply scheme and a drainage network along with understanding the village by analysing various sectors such as water, sanitation, energy, agriculture, etc.
- Design of roads and solid waste management need to be done and the integrity of designing the above systems and their relation with the public health can be studied.

Course Projects:

1. Design of Water Supply Scheme and Sanitation for village Vavoshi, Raigad, Maharashtra (TD 654).
   - To design the water supply scheme and sanitation services for the village.
   - Water supply scheme and sanitation for the village was designed for the design year 2025.
2. Analytic Hierarchy Process (AHP) analysis on various options for "Lighting a Room" (TD 605)
   - To perform AHP to identify best option among various options for lighting a room.
   - It was found that LED bulb is the best option to light a room in terms of cost of bulb, electricity consumption, luminosity and efficiency.
3. Seminar on "Energy Efficiency in Meat Processing Industry"
   - To study and analyse energy utilisation and efficiency of the different types of meat industries.
   - Various energy saving options was studied and analyzed for the meat processing industry.
4. Attended **Winter School** under Prof. NC Narayanan, CTARA, IIT-Bombay on the study of **Athirapally Hydro Electric Project** in Kerala.
   - To study and understand the necessity of the additional dam in Chalakudy River when already five dams exists in the same river by conducting survey and interacting with the stakeholders.
   - It was found that dependency of the farmers on dam water had been reduced, but environmental consequences would be there if that get constructed.

B.E. Project: *Flow Analysis on Diesel Particulate Filter*, guided by Asst. Prof. Sivaraj C. [*July'13-Mar'14*]

- To analyse the movement of Particulate Matters (PM) in the exhaust gas of a diesel engine in the Diesel
- Particulate Filter (DPF).
- The pressure drop, deposition of soot fraction, flow field trajectories, velocity field along the length of
- DPF were successfully predicted inside the DPF.

Third Year-Mini Project: *Solar Tracking Parabolic Reflector*, guided by Asst. Prof. Raj Kumar SM [*Jan'13-April'13*]

- To design and fabricate a parabolic sunlight reflector which can track the movement of the Sun in order to increase the heat generated due to the concentration of the sunlight.

POSITION OF RESPONSIBILITY

- **Teaching Assistant** for Mechanical Workshop (2014-15), CTARA and for Food Lab (2015-16), CTARA.
- **Hostel Alumni Secretary** for H12, 2014-15 and part of HDA team in SARC, IIT-B in 2014-2015
- **Vice-Secretory** for the Mechanical Engineering Association and Society of Automotive Engineers, EBET-i Collegiate Club during the academic years 2011-12 & 2012-13 respectively.

ACHIEVEMENTS

- Undergraduate **University rank-50** (Anna University, Chennai)
- Secured **1st place** in Paper Presentation in Kongu Engineering College on the title "Solar Powered Stirling Engine"

EXTRA-CURRICULAR ACTIVITIES

- First position- Group dance event, PG Cult 2015.
- Paper presented on the topic "**Solar Powered Stirling Engine**" in IIT Madras.