# Gagan Bansal

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## EDUCATION

| YEAR | DEGREE/CERTIFICATE | UNVI./INSTITUTE | PERCENTAGE |
|---|---|---|---|
| 2012-2016 | B.Tech EEE | Panjab University,UIET | 84.90 |
| 2012 | Senior School Certificate CBSE | Government Model Senior Secondary school 37-B Chandigarh | 90.20 |
| 2010 | Secondary School CBSE | Gian Jyoti Public School , Phase-2 , Mohali | 89.30 |

## EXPERIMENTAL LEARNING (SUMMER INTERNSHIP PROGRAM)

- **Company Name** : DDMB CONSULTANTS
- **Project Title** : **DESIGN SIMPLIFIED**
- **Duration** : 4 weeks

## SIX MONTHS TRAINING

- **College Name** : UIET, PANJAB UNIVERSITY, CHANDIGARH
- **Project Title** : Minimisation of transmission line losses using shunt power allocation system using UPFC-unified power factor controller
- **Duration** : 6 months

## TECHNICAL SKILLS

- Having good knowledge about ELECTRICAL MACHINERY.

- Having key interest in power systems and power electronics.

## PROJECTS

- Water Level Indicator.
- Electronic Voting Machine Using Seven Segment Multiplexing With 8051 microcontroller(AT89C51).
- Voltage stabiliser.
- Minimisation of transmission line losses using shunt power allocation system(using UPFC-unified power factor controller).

## PROJECT DESCRIPTION (Water Level Indicator)

- This project consists of 4 transistors BC548, 6 resistances each of value 220 ohm,a buzzer ,4 LEDS, connecting wires
- Each wire is connected to LED of different colour which indicates different water level.
- When water level reaches preset level , buzzer makes alarm.

## PROJECT DESCRIPTION (Electronic Voting Machine)

- This project display the count of votes on a set of seven segment displays.
- A set of switches are provided through which a user can cast vote.
- After every cast of vote, the subsequent count can be seen on the seven segments.
- The segments and switches are controlled through AT89C51.
- For every candidate, a segment has been provided.

## PROJECT DESCRIPTION ( Voltage Stabliser)

- This is a relay type voltage stabiliser.
- Components used in this project are:
  - IC LM324
  - Transistor (BC548x2)
  - Zener diode (3.9V)
  - Bridge
  - Diode (1N4007x2)
  - LED (Green, Red)
  - Capacitor (100uFx2, 1000uF)
  - Resistor (1Kx5,180/20 watts)
  - POT (10Kx2)
  - Buzzer (12V)
  - Relay (12V/10A)
  - Transformer (230V/0-12V; 500mA)
  - 15 watt incandescent lamp
  - Circuit design of stabilizer is quite easy and compact. This is a relay type voltage stabilizer circuit diagram.
  - A 12V step down transformer is used to drive the stabilizer circuit and the same transformer is used to analyze the input line voltage.
  - Bridge rectifier is employed to convert AC to DC and 1000µF capacitor is used to filter AC ripples.
  - LM342 has four embedded comparators, among those we have used only two comparators for our stabilizer. First comparator compares low voltage level and other one for comparing high voltage level.
  - A 3.9V Zener diode is used to obtain reference voltage of 3.9V (can use any Zener diode of below 6V) and this reference voltage is used by both comparators.

- Reference voltage is connected to the non-inverting terminal of the upper comparator and potentiometer is connected to inverting terminal. Then adjust the potentiometer value to get voltage greater than 3.9V (reference voltage) by keeping normal input voltage.
- Inverting terminal of lower comparator is connected to reference voltage and the potentiometer corresponding to it is set to a voltage which is below the reference voltage (3.9 V) at non-inverting terminal.

## PROJECT DESCRIPTION (Minimisation of transmission line losses using shunt power allocation system – using UPFC)

- In this MATLAB SIMULATION is done.
- Simulation of 5 bus 500KV/230KV transmission line system is made and noted its power flow and voltage profile without and with UPFC and noted the variations.

## ACHIEVEMENTS

- Got fifth position in the examination held for the session 2012-2013.
- Got certification in IEEE National Conference On Cognizance Of Applied Engineering And Research.
- Attended the TRANSFORMER workshop held in college .
- Two times GATE qualified in Electrical engineering and got AIR-1297 in 2017.
- Cracked BARC exam in 2016 with score of 163/300 and qualified for interview held in MUMBAI.
- Cracked BARC exam in 2017 with marks of 194/300 and qualified for interview held in MUMBAI.
- Also, cracked PSTCL and PSPCL JE EXAMINATION with a score of 57.5/100.
- Cracked COAL INDIA LIMITED exam held in 2017 with marks of 147/200 in Electrical Engineering.

## INTERPERSONAL SKILLS

- I am Socialiser (easily make new Friends , build relationships , value the relations and set up trust).
- Confident and Determined.
- Friendly nature , Fun loving, Have sense of Team work.
- I have positive attitude , Leadership qualities and also ready to face challenges.

## PERSONAL INFORMATION

- **Father's Name** : Sh. SANTOSH KUMAR BANSAL
- **Date of Birth** : September 26, 1993
- **Languages Known** : English, Punjabi & Hindi
- **Nationality** : Indian
- **Hobbies** : listening Music, playing cricket & likes to do chat .