

## EDUCATION

|           |                           |  |                          |
|-----------|---------------------------|--|--------------------------|
| 2012-2017 | IIT Kharagpur             | Dual degree in Civil (Structural) Engineering    | CGPA: <b>9.04/10</b>     |
| 2010-2012 | DAV Public School, Kota   | Central Board of Secondary Education (CBSE)      | Class XII: <b>89.00%</b> |
| 1997-2010 | Ann Mary School, Dehradun | Indian Certificate of Secondary Education (ICSE) | Class X: <b>96.12%</b>   |

## ACHIEVEMENTS

- Received **Shell India Chairman's Award** for 'Mobile LNG' winning idea as part of Annual Business Challenge in 2017
- Awarded **Institute Silver Medal** in 2017 & **Swapan Gupta Memorial Scholarship twice** by IIT Kharagpur for 1st batch rank
- Attained Micro specialisation in **engineering systems reliability** with ACGPA of 9.25

## PROFESSIONAL EXPERIENCE

### SHELL PROJECTS & TECHNOLOGY | CIVIL & STRUCTURAL ENGINEER Bangalore | July 2017 – Present

- Reviewed integrity of **jetty** for installation of safer access way through modeling soil-structure interaction in **USFOS**
- Conducted assessment of **flare structure** in lieu of increased wind loads through advanced analysis in **USFOS**
- Developed Excel VBA tool to calculate optimal design thickness for piping **thermal insulation**
- Reviewed anchor points as part of safety control framework for structural adequacy in working from height scenario
- Supported project deliverable during concept phase for sub-sea and pipelines scope of work for offshore O&G project
- Supported in development of site feasibility report for opportunity realization of onshore O&G project

### MASTER'S THESIS | PROF. S K BARAI Kharagpur | July 2016 – May 2017

Analysis and Design Framework for steel braced frames under seismic loading

- Developed numerical simulation in ABAQUS to predict non-linear hysteresis response due to cyclic loading on steel braces
- Awarded **Best Master's Thesis Project** in 2017 by IIT Kharagpur

### SHELL PROJECTS & TECHNOLOGY | ASSESSED INTERNSHIP Bangalore | May 2016 – July 2016

- Developed neural graph showing complexity in existing standards inter-referencing; received appreciation by **the CEO**
- Consolidated **competitive review** against industry practice, international codes & comprehensively **improved 1 standard**

### BACHELOR'S THESIS | PROF. S K BARAI Kharagpur | July 2015 – April 2016

Prediction of concrete compressive strength using M5' decision tree model

- Achieved **92%** model accuracy by optimizing input choice with performance through **parametric study using R**
- Publication: Progress in Advanced Computing and Intelligent Engineering pp 425-432 (2018)

### UNIVERSITY OF NEW SOUTH WALES | PRACTICUM EXCHANGE Sydney | May 2015 – July 2015

- Developed FEA models in **ATENA** & iterative numerical analysis in **Excel VBA** to validate analysis with experiment results
- Achieved **90%** accuracy in strength and crack pattern prediction for de-constructible steel-concrete composite deck slabs

### HUMANITIES & SOCIAL SCIENCES, IIT KHARAGPUR | SANDHI INTERN Kharagpur | May 2014 – July 2014

- Identified ethnographic factors for target audiences from **survey of 45 hospice websites** & designed web portal
- **Conceptualised** communicative info portal considering effect of web design on perception from survey & **Google Analytics**

## LEADERSHIP EXPERIENCE

### TEAMKART - FORMULA1 PROTOYPING, IIT KHARAGPUR | DESIGN HEAD Kharagpur | Apr 2014 – Apr 2015

- Led design team and **reduced weight** of uprights & hubs by **30%** in Altair Hyperworks by topology optimisation
- **Saved cost by 25%** for suspension budget through in house manufacturing, design optimisation & alternative procurement
- Assembled **exhaustive CAD (500+ parts)** of current car for detailed planning of budget, timelines & manufacturing

### AIIESEC, IIT KHARAGPUR | TEAM LEADER Kharagpur | Feb 2013 – Jan 2014

- **Improved** program's campus **outreach by 300%** by targeting **105 students** through intensive **information seminars**
- Delivered Youth to Business Forum 3.0 having total outreach of **2** international speakers to **1500** students
- Delivered Global Village with **10 International Interns** showcasing their country & culture to **400+** students

## VOLUNTARY ACTIVITIES

|            |   |
|------------|---|
| Projects   | <ul style="list-style-type: none"><li>• MATLAB based optimisation of concrete column controlled by reliability analysis using Monte Carlo methods</li><li>• Risk overview of subject performance by fuzzy logic on GPA &amp; attendance captured through web application</li></ul>  |
| Initiative | <ul style="list-style-type: none"><li>• Assimilated construction site experience as a field trainee with <b>Delhi Metro Corporation, New Delhi</b></li><li>• National finalist among 25 teams in <b>General Electric Edison Challenge 2016</b> with <b>traffic decongestion</b> idea</li><li>• Volunteered as Safety Team member at <b>Shell Eco-Marathon Singapore 2018</b> to prevent unsafe acts</li></ul> |

## SKILLS

|                                 |  |
|---------------------------------|--|
| <b>Technical:</b>               | Finite Element Analysis, MATLAB, STAAD, USFOS, MS Office, <b>Excel VBA</b> , $\text{\LaTeX}$ |
| <b>Non-Technical:</b>           | Stakeholder management, Event management, Collaborative team player                          |
| <b>Hobbies &amp; Interests:</b> | Racket sports, Spanish guitar, Automobiles, Cooking, Psychology                              |