

EDUCATION

| Examination | Institute | Degree/Board | Year | CPI/% |
|----------------|--------------|--|------|-------|
| Graduation | IIT Bombay | B. Tech. in Mechanical Engineering | 2018 | 8.2 |
| High Secondary | MPS, Kota | Central Board of Secondary Education | 2014 | 85.8 |
| Secondary | MGM, Kapasan | Rajasthan Board of Secondary Education | 2012 | 90.0 |

PROFESSIONAL EXPERIENCE

BOSCH (RBEI) | Senior Engineer Jul'18-Present

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| Automation In Simulations | Abaqus and Python: Optimization of the python code to improve performance of a simulation <ul style="list-style-type: none">Improved scripts to decrease time complexities from $O(n^3)$ to $O(n)$ in node search calculations; at least 64% fasterNew feature integration with automated post-processing reducing at least 15% effort for overall simulation studyInteracting with 4+ German Customers to improve the method for resistance welding simulations |
| Welding Curves Prediction and Optimization | Resistance Spot Welding: Building an architecture to predict and optimize current curves to achieve target values <ul style="list-style-type: none">Structured and cleaned data of size 4+GB and more than 1 Lakh time series into tabular format for modelingApplied ML techniques from Scipy with parameter tuning and grid search; achieving 90% R^2 in predictionBuilt a workflow to study this type of data; thereby creating a POC for this type of time series analysis |
| Sensor Simulations | Modal, Harmonic and Thermal Simulations: Supporting business unit in Germany for ANSYS structural simulations <ul style="list-style-type: none">Simulated modal, harmonic and thermal simulation for automobile sensors; handled 100+ parts and connectionsSupported client with results and design changes; helped increasing safety by 10+% within -20° to 100° Celsius |

JEEVTRONICS PVT. LTD. | Design Engineer May'17-Jul'17

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| Design Project | Gear Box Design: Summer Internship project to design gear box for a defibrillator, a medical device <ul style="list-style-type: none">Analyzed noise vibration measurement and Amplitude Frequency plots with MATLAB; finding 5+ modes of failuresProposed and prototyped design with Excel calculations; theoretically reduced noise within 85dB |
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LEADERSHIP ROLES

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| Dept. Team Activities | Core Team Member: Team of 6 members to organize and execute various team building activities Mar'19-Present <ul style="list-style-type: none">Organized a weekend team outing event for 80+ associates; estimating 200+ increase in connections across teamsCreated and guided 80+ people in various games and tasks in team building activities; appreciated by Dept. Head |
| Game development | Fibonacci 2048: Spearheaded a team of 4 in course project of C++ Programming and Utilization Aug'14-Nov'14 <ul style="list-style-type: none">Created a game similar to 2048 with sequence of Fibonacci in C++; learnt object oriented programming conceptPresented and reviewed the code documentation to guide professor without prior experience in coding |

SKILLS AND COMPETENCIES

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| Programming | <ul style="list-style-type: none">Languages and Applications: Python (Advanced), R, SQL, C++, MATLAB, Git, ANSYS, AbaqusAlgorithms in ML: Decision Trees, Classification and Regression, SVM, Neural Networks, Bayesian Models |
| Analytics | <ul style="list-style-type: none">Electives in Statistics: Probability and Random Processes, Data Mining with R in Mechanical EngineeringStatistical Analysis: Regression and Classification, Hypothesis testing, Time Series Modeling, A/B Testing |
| Simulations | <ul style="list-style-type: none">ANSYS and Abaqus: Thermal and Mechanical Modal, Static, Explicit simulations with Finite Element Analysis |

COMPETITIONS

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| Code Jam 2020 | <ul style="list-style-type: none">Qualified to round A in Google Code Jam 2020 after scoring 30+ marks and placed among 30,000 internationally |
| RBEI ML Competition | <ul style="list-style-type: none">Represented my department with team of 3 in top 10 finalists with 2nd on leaderboard, among 100+ teamsPresented the automated selection from 5+ ML models for gas refilling time prediction for cost reduction |
| JEE Advanced | <ul style="list-style-type: none">Stood 1st in district with All India Rank 236 among 1.4+ Million students in Joint Entrance Examination 2014 |

EXTRACURRICULARS

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| Awards and Sports | <ul style="list-style-type: none">Received gold medal in Department Chess tournament among 24+ candidates in team building eventsBagged bronze medal in Inter Hostel Chess tournament in 15+ hostels with a team of 5 students |
| Cultural | <ul style="list-style-type: none">Participated and showcased 2 sketches in Kaladarshan which is an art appreciating festival |
| Social Activities | <ul style="list-style-type: none">Abhyasika IITB: Taught Organic chemistry to 11th standard dropout student with regular testsSuccessfully completed 1-year National Service Scheme(NSS) Green Campus course |