Abhishek Roy

5 Years 9 Months Overall Experience

A strategic leader with 5+ years of engineering experience, adept at blending MBA-led business strategy with technical execution to enhance bottom-line performance. Proven ability to architect automation and Generative AI solutions using Python and VBA, resulting in a 40% acceleration in decision-making and a 100% improvement in project throughput. Recognized for driving high-impact digital innovation within the highly regulated nuclear energy sector, effectively merging advanced technical solutions with stringent business and safety requirements to inform executive-level strategy.

Industry

- Engineering Consulting
- Thermal Solutions (Nuclear Power)

Functional Areas

- Engineering Consulting
- Design Engineering
- Data Analysis

Education

Indian Institute of Management, Indore

Master Of Business Administration

2025-2026

Vellore Institute of Technology, Vellore

Bachelor Of Technology (Civil Engineering)

2015-2019

Certification

McKinsey Forward Program

Structured problem-solving, digital fluency, communication and resilience

2025

BCG Strategy Consulting Simulation (Forage)

Strategic evaluation, market entry, hypothesis building, client communication

2025

Deloitte Australia Data Analytics Simulation (Forage)

Data cleaning, insight generation, and executive presentation

2025

Google Data Analytics Professional Certificate

Completed the Google Data Analytics Professional Certificate, gaining hands-on experience in cleaning, analyzing, and visualizing data with SQL, R, and Tableau to solve business problems and inform strategic decisions

2025

The Business Intelligence Analyst Course 2022

Data analysis (Excel, SQL), Tableau dashboards, business problem solving

2022

Accomplishment

Smartkid General Knowledge Olympiad '12

Acquired 1st Position in Class in a National Level Quiz Competition

Education

Indian Institute of Management, Indore

Master Of Business Administration

2025-2026

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Bachelor Of Technology (Civil Engineering)

2015-2019

Experience

Paharpur Cooling Towers Limited

2 Years and 9 Months
Senior Structural Engineer

Jul' 22 - Mar' 25

- Drove the design strategy to design regulation-compliant structural solutions for high-risk Nuclear Power projects worth Rs. 170 Cr.
- Collaborated with multiple discipline to create streamlined engineering workflow to reduce waiting time for the next design phase
- **Advanced Process Automation & Efficiency**: Engineered a sophisticated automation framework using Python and VBA:
  - Developed standard automation programs to reduce waiting time across disciplines for organization wide usage
  - Reduced finite element simulation time by 30% by conducting a baseline workflow audit, setting a 90%-automation target, identifying five manual bottlenecks, and architecting and developing a phased Python-VBA implementation roadmap
  - Reduced finite element simulation time by 30%, recapturing over 60 engineering hours each month to be reallocated
  - Eliminated 95% of manual data entry errors, improving design reliability and mitigating significant financial risks associated with costly downstream project rework and delays, also creating standardized processes to be reused in future projects.
  - Increased overall design throughput by 40%, enabling the team to take on additional projects without increasing headcount
- **Data Analysis & Visualization Pipeline:** Developed and deployed a robust, end-to-end data pipeline using Python to automate the analysis of complex simulation data, empowering leadership with actionable insights for strategic decision-making.
  - Development using Python (Pandas, NumPy, Matplotlib) to automate the analysis and reporting of complex simulation data.
  - Processed raw datasets with over 100K data points to perform a sensitivity analysis, identifying upper limits of parameters
  - Reduced report generation time from 4 hours to under 15 minutes-leading to a 90%+ time savings per report
  - Transformed dense 50-page technical logs into concise 2-page visual summaries to present findings and recommendations to leadership, which accelerated data-driven design validation by 75%, enhancing progress on critical project milestones
- **Strategic Technology Integration:** Strategic Technology Integration: Partnered with executive leadership to champion and integrate a Generative AI tool for workflow optimization, which doubled the speed of initial project drafting and data synthesis, cutting down preliminary planning phases by an estimated 40-50 hours per project, was awarded recognition from top leadership on the same

Development Consultants Private Limited

3 Years
Design Engineer

Jun' 19 - Jun' 22

- Executed end-to-end structural design for nuclear power projects, ensuring zero compliance issues and upholding impeccable safety standards which are critical for project sanctioning, and solidifying reputation to securing future contracts
- Formulated the hypothesis that manual calculations were the primary bottleneck in project timelines. Validated this by developing and deploying a suite of VBA macros to automate these processes, resulting in the following outcomes:
  - Used VBA to create a macro tool, reducing manual data processing and calculation workload by over 60%
  - Achieved 90% reduction in documentation errors, improving the reliability and consistency of regulatory submissions

- Ensured 100% compliance with rigorous safety norms, owning end-to-end design and liaising with cross-functional teams
- Interpreted and localized global structural codes into project-specific design solutions through automation, reducing error.
- **Data-Driven Project Planning:** Developed a data-driven planning framework in Excel for managing multi-phase design cycles, improving delivery coherence and led to 20% reduction in coordination-related delays between engineering teams.
- Strengthened analytical capabilities through hands-on experience in real-world modeling and compliance environments.