

ABHAY SINGH

Roll No.:2022UCE0002

Civil Engineering

Indian Institute Of Technology, Jammu

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Github

Digital Portfolio

linkedin.com

EDUCATION

| Degree/Certificate | Institute/Board | CGPA/Percentage | Year of Passing |
|--------------------|---------------------------------------|-----------------|-----------------|
| B.tech (EE) | Indian Institute of Technology, Jammu | 6.76 | 2026 |
| 12th Standard | GRD Academy/CBSE Board | 94% | 2022 |
| 10th Standard | Kundan Vidya Mandir/CBSE Board | 95.6% | 2020 |

EXPERIENCE

• SR Capitals - Remote

Aug 2026 - Sept 2024

Private Equity Research Internship

- Performed in-depth macroeconomic analysis, evaluating the impact of global and regional economic trends, policy changes, and geopolitical events on sectoral growth and stock market performance .
- Contributed to more informed and strategic investment decisions by delivering thorough sector and company analyses, leading to optimized portfolio performance .

PROJECTS

– Curating Alphas on BTC and USDT Crypto Market

Oct 2024 - Dec 2024

Developed a highly advanced and accurate price predicting model for BTC and USDT in python

Github

- * Using technical indicators such as SMA, EMA, RSI, and Bollinger Bands, combined with dynamic data smoothing techniques, the strategies enhance signal clarity and reliability.
- * Integrated Dual-Strategy Integration (Trend and Reversal) , Granular Risk Management Layers & Data-Driven Volatility and Momentum Integration and acheived a acuuracy of 89% .

– UI/UX Designing

Jan 2025 - Feb 2024

Developed the UI/UX design for a AI Chatbot for the E-Sumit of IIT Roorkee

Github

- * Designed a seamless and intuitive UI/UX experience in Figma of a Personalized AI Companion, focusing on simplifying navigation, improving visual hierarchy, and ensuring responsiveness across devices.
- * Leveraged Figma's collaborative features to iterate quickly and incorporate real-time feedback. Excited about how this design enhances the user journey and aligns with the brand's vision.

– Robotic Arm Project

Sept 2023 - Mar 2024

Developed a highly advanced Robotic Arm with accurate positioning

Github

- * **Tools & technologies used:** Ardunio,ROS,Motion Planning,CAD,MATLAB,Gazebo,and Moveit Setup Assistant.
- * Developed a precise robotic arm with inverse kinematics, improving efficiency by 48% and led design and simulation efforts, reducing development time by 32% .
- * Demonstrated leadership by directing CAD modeling, Gazebo simulation, motion planning, and MATLAB , resulting in a 32% reduction in development time.

– SAEISS DDC

Sept 2023 - Mar 2024

Successfully designed and made a fully functional RC plane

Github

- * Utilized AutoCAD and Onshape to create sketches, 3D models, and preliminary layouts for visualizing the design of a plane.
- * Conducted aerodynamic simulations using tools like ANSYS Fluent to optimize wing design, control surfaces, and airfoil selection, ensuring lift-to-drag ratio optimization for enhanced flight performance.
- * Used 3D printing technology to prototype critical components like winglets and fuselage parts, ensuring quick iterations and testing of design modifications.

– Inter IIT Civil Conclave

Jan 2025 - Feb 2025

Created and analysed a pony truss bridge using AutoCAD and STAADPro

Github

- * Developed a structurally efficient bridge, optimizing load distribution, stability, and deflection limits using AutoCAD , STAADPro and Midas Civil.
- * Secured 2nd place in a prestigious national-level Inter-IIT competition, showcasing expertise in bridge design and structural analysis.
- * Conducted detailed simulations and testing to evaluate performance under various loading conditions.

- **Structural Design**

Jan 2024 - Apr 2024

Designed a seismic-resilient and material-efficient structural system for a multistory building.

- * Developed a 3D structural model, including beams, columns, slabs, and walls, by defining nodes, members, and plate elements using STAAD Pro and AutoCAD.
 - * Generated detailed reports and diagrams for bending moments, shear forces, and deflections of structural elements, applying load cases (dead, live, wind, seismic) per IS code specifications.
 - * Generated detailed reports and diagrams for bending moments, shear forces, and deflections for all structural elements .
- **RC Car Making**

Nov 2023 - Apr 2024

Designed a fully fuctional RC Car

Github

- * Designed a fully functional RC car model using CAD software including AutoCAD and Onshape .
 - * Selected appropriate motors and electronic components to comply with competition rules .
 - * Optimised the speed the accleration of motors using arduino .
- **2D Game Development**

May 2024 - Aug 2024

Designed and made 2D games like Flappy Bird and Tetris

Github

- * Developed a 2D Flappy Bird game using Unity and C#, implementing obstacle generation, scoring, and collision detection.
 - * Optimized game performance and responsiveness to ensure smooth and engaging gameplay.
 - * Utilized Unity’s UI tools to create dynamic menus, HUDs, and interactive elements, ensuring a polished and immersive gaming experience.

TECHNICAL SKILLS

- ***Programming:** C/C++,Python,HTML,CSS
- ***Tools & OS:** AutoCAD,Google Colab, StaadPro, Windows
- ***Web Skills:** Node.JS ,HTML,CSS,Javascript, ReactJS

POSITIONS OF RESPONSIBILITY

- * **Co-Convener** , Entrepreneurship Festival UDYAMITSAV , IIT Jammu
 - * **Event Management Head** , Finance Club, IIT Jammu
 - * **Organiser of CXO Challenge**, IIT Jammu
 - * **Sponsorship Head** , Music Club , IIT Jammu
 - * **Design Head** Robotics Club , IIT Jammu
 - * **Event Management Head** , Entrepreneurship Festival UDYAMITSAV , IIT Jammu
 - * **Sponsorship Head** , Cultural Festival Anhad , IIT Jammu
- Present

2023-2024

2024-2025

2022-2023

2023-2024

2023-2024

2023-2024

CERTIFICATIONS

- * 100 Days of Code : The Complete Python Bootcamp by Udemy.
- * Complete French Course by Udemy .
- * Basics of UI/UX by Simplilearn
- * LottieFiles for Figma Course by LottieFiles