



# Akshit Singh

Bachelor of Technology  
in Mathematics and Computing  
Indian Institute Of Technology, Ropar

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GitHub | Akshit-Portfolio  
LinkedIn | CodeForces

## EDUCATION

Degree	Institute/Board	CGPA/Percentage	Year
Bachelor of Technology	Indian Institute of Technology, Ropar	6.5 (Till 6th Sem)	2021-2025
Senior Secondary	D.A.V Public School Sreshtha Vihar Delhi-92	95.6%	2021
Secondary	Holy Angel's Sr. Sec. School Rajender Nagar Ghaziabad(ICSE)	92.4%	2019

## EXPERIENCE

- Research Internship , IIT Guwahati** May 2024 - Aug 2024  
*Deep Reinforcement-Learning*
  - Explored the Neural PPO algorithm's potential in gaming and real-world simulations, enhancing complex environments.
  - Analyzed its convergence to optimal policies under defined assumptions for improved performance for desired outcomes.
- Full stack developer for Technology Buisness Incubation Foundation(TBIF) IIT-Ropar** April 24 - present  
*Full Stack Developer / React , HTML , CSS, TailwindCSS, ExpressJs, Apache, nginx* **Website**
  - Built an engaging and responsive frontend with React and TailwindCSS, enhancing user experience.
  - Developed a Node.js backend to automate email services and improve website functionality.
  - Deployed the website on the college server using Apache, resolving rendering issues to ensure smooth operation.

## PROJECTS

- CryptoCurrency Tracker** May 23  
*MERN , TwitterAPI, RapidAPI , ReactChartJS , TailwindCSS* **GitHub**
  - Developed and launched a comprehensive website that allows users to monitor an overview of over 100 cryptocurrencies.
  - Utilized React.js and RapidAPI to enable detailed tracking of individual cryptocurrencies, including metrics such as current price, total market capitalization, and price fluctuations. Integrated ReactChartJS for visual data representation
- Exponential Trees** November 22  
*DSA Course Project under Dr. Anil Shukla* **GitHub**
  - Sorting a set of integers has been a long-standing problem that has garnered significant attention from researchers.
  - Exponential Trees present an efficient solution to this problem, offering a sorting bound of  $O(n \log \log n)$  for a set of  $n$  integers..
  - In this project, a modified version of Exponential Trees has been utilized to streamline the implementation process, thereby facilitating easier application and utilization.
- Quadcopter Landing on Inclined Surface Using Deep Reinforcement Learning** Mar 23  
*Reinforcement-Learning, Python, PyTorch, Numpy, StableBaselines3* **GitHub**
  - Created a platform to evaluate and compare various reinforcement learning algorithms to determine the optimal policy.
  - Determined the optimal angle for successfully landing a quadcopter on a moving inclined surface.
  - Evaluated & Compared with other Algorithms like TD3(Twin Delayed DDPG) , Soft Actor-Critic , Adv Actor-Critic(A2C)

## Minor Projects

- Hospital Management System For IIT Ropar** **GitHub**  
Developed a Management Portal using MERN stack for IIT Ropar Medical Center and implemented on a ground zero
- Spam Mail Detector** **GitHub**  
Python, Flask , ReactJs , TailwindCSS , TfIdfVectorizer Predicts whether a mail is a spam or not using NLP.
- Child Health Tracking App** **GitHub**  
Flutter , Android Studio , App Scripts Developed Android App for nutritional check on child health.
- ChatMania** **GitHub**  
MERN stack, Socket.io , JsonWebToken Allow Conversaion between multiple User and one-to-one chat facility.

## TECHNICAL SKILLS

- Programming Languages:** C | C++ | Python | JavaScript | SQL | Java8
- Web & App Development:** React | Bootstrap | HTML | CSS | React Native | Flutter | RDBMS | Docker | Tailwind CSS | Node.js | Next.js | JWT | RESTful API
- Tools:** AWS | Firebase | Android Studio | Jupyter | Git/GitHub | Colab | MongoDB | Postman

## KEY COURSES TAKEN

- CSE & Maths:** Data Structure and Algorithms, Real Analysis, Discrete Mathematics, Theory of Computation, Introduction to Numerical Analysis, Probability and Statistics, DBMS, Java fundamentals and OOPs, Operating Systems
- Others:** AWS fundamentals mastery, Signals and Systems, Tinkering Lab (Arduino), Economics

## POSITIONS OF RESPONSIBILITY

- Head, Inter School Conclave,**(Advitiya, Tech-Fest IIT Ropar) - Managed 1800 School Students. Dec 23 - Mar 24
- Class Representative,**Established a smooth bridge between Students and Academic Section. Nov 21 - present
- Coordinator,**Debating Society(Debsoc)-Teaching my fellows about rational thinking Apr 22 - Apr 23
- Hostel & Mess Representative,**Managed over 600 students and proper functioning of mess and hostel. Apr 22 - Apr 23

## MISCELLANEOUS

- Codeforces:**, **Specialist** max rating: 1465
- Amazon ML Challengege & Amazon ML Summer School 2024,**Secured 370 rank among 65000 teams all over India.
- Leetcode,** Current Rating 2100
- Codechef,** 4 star Coder