



AKSHAT JHA



ACADEMIC DETAILS

Year	Degree / Board	Institute	GPA / Marks(%)
---	B.Tech in Computer Science & Engineering	Indian Institute of Technology Delhi	9.97
2022	Central Board of Secondary Education	AK Children Academy, Ghaziabad	97.6%
2020	Central Board of Secondary Education	AK Children Academy, Ghaziabad	96.6%

SCHOLASTIC ACHIEVEMENTS

- Ranked Second in the Computer Science and Engineering Department and the institute among 2022 entry students**
- **IIT Delhi Merit Award:** Awarded in all semesters of 2022-23 and 2023-24 for being in Top 7% of the institute and CSE department
 - **HSE Saint Petersburg Students Week:** Invited by HSE University, St. Petersburg, for a fully funded trip to attend Computer Science workshops in the Saint Petersburg Campus in June 2024 based on IIT Delhi's recommendation
 - **Jane Street SEE | Jane Street Asia Limited, Hong Kong :** Selected among **top 50 students from all IITs** for a winter program. Attended workshops in Machine Learning and Trading. Learnt OCaml and the Core and Async library and built a computer game.
 - **National Standard Examinations and Olympiads:**
 - **Top 50 out of 19,000+** candidates in IOQC. Eligible for **International Chemistry Olympiad Camp** at HBCSE, TIFR
 - **National Top 1%** in Astronomy and Chemistry. **State Top 1%** in Physics. Qualified **Zonal Informatics Olympiad 2021**
 - **JEE Main 2022:** 99.98 Percentile | **100 Percentile** in Physics - Ranked 245 out of 1,000,000+ candidates
 - **JEE Advanced 2022:** All India Rank 264 out of 160,000+ candidates qualified through JEE Main
 - **Kishore Vaigyanik Protsahan Yojana:** Awarded KVPY SX 2022 (Ranked 254 out of ~100,000 candidates) and KVPY 2021 SA Fellowship by the Indian Institute of Science, Bangalore
 - **NPTEL Star in Mathematics:** Received Discipline Star from National Programme in Technology Enhanced Learning, IIT for being top performer in courses in Mathematics and Statistics

INTERSHIPS

- Algorithms-Biology-Structure, INRIA Sophia Antipolis (May, 2024 - July, 2024) :** *Sampling of Multi-Loop Systems*
- Created new packages in the **Standard Bioinformatics Library** for Lie Group Interpolation and Molecular Visualisation
 - Reformulated conformational changes as TSP and applied approximation algorithms to predict transition probabilities
 - Improved Loop Sampling to achieve **better results than the current State of The Art** methods based on MD simulations
 - Attended workshops and training sessions in Computational Geometry, Machine and Deep Learning and Topology

PROJECTS

- **NREGA Impact Assessment | ACT4D, IITD (Prof. Aaditeshwar Seth)** Summer 2023
 - Improved Causal ML models to understand effect of NREGA water bodies on vegetation to identify confounding variables
 - Developed a web application to visualise watershed and LULC data collected by the GramVaani and ACT4D team
- **Focus App | Design Practices (Prof. Huzur Saran)** Spring 2024
 - Designed a Android app from scratch with gamification elements. Incorporated social components for user engagement and challenge-based focus improvement along with an AI chatbot. Used Firebase Auth and Storage, Flame and ChatGPT
- **FPGA Image Processing | Digital Logic and System Design (Prof. Preeti Ranjan Panda)** Fall 2023
 - Designed an image filter processing unit, memory units and VGA display output unit using VHDL for Basys3 FPGA board
- **QnA Tool | Data Structures and Algorithms (Prof. Subodh Sharma)** Fall 2023
 - Developed a tool to answer queries related to a corpus using an algorithm to rank search result documents based on relevance and implemented Retrieval Augmented Generation with ChatGPT API to answer queries with the context
- **Prolog Interpreter | Programming Languages (Prof. Sanjiva Prasad)** Spring 2024
 - Developed a Prolog interpreter (a logic programming language) in OCaml from scratch, implementing functionalities such as lexical analysis, token parsing, and execution of programs using efficient backtracking and unification processes
- **Trading Simulator | Design Practices (Prof. Huzur Saran)** Spring 2024
 - Developed a stock screener using Flask, integrating API calls to fetch real-time data. Implemented caching methods to improve performance. Implementing a trading simulator in C++ testing various strategies to perform risk-assessment

TECHNICAL SKILLS

- Languages** - C++, C, Python, OCaml, JavaScript, Dart, MATLAB, VHDL, CSS, HTML
- Libraries and Packages** - CGAL, Boost, Eigen, Pandas, Flask, Google Earth Engine (GEE), sci-kit learn, NumPy, Matplotlib, Django
- Software and Utilities** - LaTeX, GDB, CMake, Git, Lex, Yacc, Autodesk Inventor, LTSpice

EXTRA CURRICULAR ACTIVITIES

- **Technical Coordinator** for the Board for Recreational and Creative Activities, BRCA IITD for the 2024-25 Tenure
- **Executive** of Association of Computation Engineers and Scientists, Association of Computing Machinery (ACES-ACM IITD)



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IIT COURSE

Degree	Institute	CGPA
B.Tech in Computer Science & Engineering	Indian Institute of Technology Delhi	9.97

COURSES DONE

Calculus, Intro. To Electrical Engg., Linear Algebra & Diffe. Equa., Intro. To Computer Science, Probability & Stochastic Pro., Discrete Mathematical Structur, Data Structures And Algorithms, Digital Logic & System Design, Signals And Systems, Microeconomics, Programming Languages, Computer Architecture, Design Practices, Numerical Algorithms

POSITIONS OF RESPONSIBILITY

- Executive, ACES-ACM, CAIC
- Hostel Representative, Quizzing, BRCA (June, 2023 - May, 2024)
- Quizing Representative, Quizzing, BHM (June, 2023 - May, 2024)
- Vibhinn 2023 Executive, Indradhanu, OTH (June, 2022 - May, 2023)

EXTRA CURRICULAR ACTIVITIES

- Organiser, IITD CSE Research Symposium
- Winner, BRCA Trophy (June, 2022 - May, 2023)
- Creator, Department Resource Repository
- 3rd Position, App a thon (June, 2022 - May, 2023)
- Dojima Winner, Dojima Hackathon (June, 2022 - May, 2023)
- Quizmaster, Castle Conundrum - A General Quiz
- Bronze Medal, Medallists in Quizzing League 2023-24
- Second Runner Up, Team Rankings in Quizzing League 2023-24
- Panel Member, Intern Ke Fundae
- Interviewer, TechBytes
- Organiser, Delhi FOSS
- Management, Stic Dinner (June, 2022 - May, 2023)