

# Zahid Jabbar Khan

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## EDUCATION

### Birla Institute of Technology, Mesra

BTECH in Electronic and Communication - CGPA: 6.56

Ranchi, Jharkhand

Jan. 2021 – June 2025

### Warren Academy School

12th PCM - Percentage: 77.0%

Jaipur, Rajasthan

April. 2020 – May 2021

## TECHNICAL SKILLS

**Languages and Technologies:** C++, C, Python, OOPs, CSS, HTML, JavaScript, SQL, Agile, MySQL

**Frameworks and Libraries:** Node.js, React.js, Express.js, Django, NumPy, Matplotlib

**Tools and Platforms:** Git, GitHub, Visual Studio, IntelliJ IDEA, NI LabView

## EXPERIENCE

### R&D Intern

June 2024 – Present

Genus Power Infrastructure Ltd.

Jaipur, Rajasthan

- Analyzed and optimized the performance of the **bsdiff4** library for creating and applying binary patches using Python.
- Implemented parallel processing in Python for patch creation and application to improve efficiency.
- Measured and reduced memory usage during the patch creation process using Python.
- Conducted detailed performance evaluations in Python, including patch size, creation time, and application time.
- Verified file integrity after patch application to ensure data accuracy using Python.
- Project Link: [Bsdiff4](#)

### Front End Web Development

March 2024 – April 2024

SolarLagao Ltd.

Jaipur, Rajasthan

- Developed and maintained front-end components for the company's web platform using HTML, CSS, and JavaScript.
- Assisted in optimizing the website's user interface and improving user experience.
- Collaborated with the back-end team to integrate APIs and ensure smooth data flow.
- Participated in code reviews and contributed to enhancing the codebase for better maintainability.
- Designed responsive web pages that improved accessibility and user engagement across different devices.

## PROJECTS

### File-Zipper | C++, Python, Shell, DSA

- Implemented a lossless [file compression tool](#) in C++ using Huffman coding, achieving up to 30% file size reduction.
- Developed a CLI supporting files up to 50MB, with 100% accuracy in compression-decompression cycles.
- Utilized priority queues and binary trees, resulting in  $O(n \log n)$  time complexity for compression.
- Integrated with my [Bsdiff4](#) algo for advanced file comparison, enabling 25% smaller patch files compared to standard diff tools.

### E-Commerce Platform | NodeJs, ReactJs, ExpressJs, JWT, Mongodb, Tailwind Css

- Engineered MERN e-commerce platform with JWT, reducing vulnerabilities by 70%.
- Optimized REST APIs, increasing system throughput by 55% and cutting response times by 60%.
- Streamlined shopping with fast cart ops and Braintree, boosting conversions by 40%.
- Implemented Redux and optimized MongoDB, enabling 3x more concurrent users.
- Project Link: <https://github.com/Zahidmohd/E-Commerce-Website>

## ACHIEVEMENTS

- Virtual Experience Programs (Forage, 2024): Completed JPMorgan Chase & Co. (July) and AWS APAC (June), developed a class and test suite for a [rewards system](#), designed a scalable Elastic Beanstalk architecture, and communicated architecture and cost details effectively.
- Cirquik College Hackathon: Won 1st place out of 10+ teams by leading a team of 4 in developing an innovative solution.

## Volunteering Experience

- Senior-Coordinator | Sports-Committee (April '21 - present) - Organized and managed 5+ events, leading a team of 10+ members.
- Campus Ambassador | Kshitij IIT Kharagpur (Dec '22 - Jan '23) - Successfully coordinated and promoted 3+ events.