# Zahid Jabbar Khan

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# **EDUCATION**

Birla Institute of Technology, Mesra

Ranchi, Jharkhand Nov. 2021 – June 2025

BTECH in Electronic and Communication - CGPA: 6.66

Jaipur, Rajasthan

Warren Academy School
12th PCM - Percentage: 77.0%

Languages and Technologies:

Frameworks and Libraries:

April. 2020 – May 2021

TECHNICAL SKILLS

C++, C, Python, OOPs, CSS, HTML, JavaScript, SQL, Agile, MySQL

Node.js, React.js, Express.js, JWT, Passport.js, NumPy, MatPlotlib

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

EXPERIENCE

**R&D Intern**June 2024 – August 2024

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.
- · 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 <u>Bsdiff4</u> 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%
- Implemented **Redux** and optimized **MongoDB**, enabling 3x more concurrent users.
- Project Link: <a href="https://github.com/Zahidmohd/E-Commerce-Website">https://github.com/Zahidmohd/E-Commerce-Website</a>

### **A**CHIEVEMENTS

- 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

- Management Head | 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.
- Coordinator | Culture-Committee (April'21 Aug'23) Successfully coordinated Vibration(cultural fest) which consist of 10+ events, leading a team of 50+ members.
- Organized a Blood Donations Camp at our college with the assistance from the Need Foundation.