

SAIF ALI KHAN

Bachelor of Computer Application
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EDUCATION

Degree	Institute/School	CGPA/%	Year
Bachelor of Computer Application	Dayanand Academy of Management Studies, Kanpur	8.19/10.0	2025
Intermediate (XII)	St. Aloysius High' School, Kanpur (CISCE/ISC)	78%	2022
High School (X)	St. Aloysius High' School, Kanpur (CISCE/ISCE)	91%	2020

EXPERIENCE

Google Summer of Code 2025 - JPF Team (Java PathFinder)

June 2025 - Present

Contributor

Link [↗](#)

- Contributing to the **Symbolic PathFinder** (SPF) symbolic execution framework, under the **JPF Team**.
- Implementing features in **SPF** to support **Runtime Exceptions** for summarized **String** methods, like **contains()**.
- In **Symbolic PathFinder** (SPF), I'm working with technologies such as **Java**, JVM internals, static analysis, model checking, and **Gradle** for build and dependency management.
- Currently working on enhancing the **SymbolicListener** in **Symbolic PathFinder** (SPF) to support symbolic choices for null and not-null references, raising of **NullPointerException** during symbolic execution.

PROJECTS

Smart Contact Manager | Java, Spring Boot, Thymeleaf, MySQL |

Jan 2025 - Present

- A secure, full-stack **contact management** web application, which allows users to securely create, update, view and delete contacts through responsive user interface.
- Designed responsive **user interface** using **Thymeleaf**, **Tailwind CSS**, and **Flowbite** with dark/light theme.
- Utilized **JPA** and **Hibernate** for efficient data persistence facilitating smooth interactions with the **MySQL** database to ensure data integrity. The project uses **Maven** as a build tool.
- Implemented advanced contact management features, including **search**, **filter**, and **pagination**, allowing users to efficiently navigate and manage large contact lists.

mathJX | Java, Mathematics, Algorithms |

March 2025 - Present

- Developing a comprehensive **Java-based mathematical library**, implementing core concepts such as **Logarithms**, **Sieve of Eratosthenes**, **Fast Exponential**, and many other efficient algorithms, like **Newton-Raphson**, **Runge-Kutta**, **forward differences**, **Gauss-Seidel**, etc.
- Optimized **algorithms** by incorporating checks for different scenarios, like **limiting iterations to square root** of target integers while finding prime numbers.
- Using **IntelliJ IDEA** for development, with **JUnit Jupiter** leveraging robust features to write, test, debug the mathematical functions implemented effectively.

TECHNICAL SKILLS

Languages: Java, C/C++, JavaScript, SQL, Golang

Technologies/Frameworks/Libraries: Spring Boot, Hibernate, JUnit, Tailwind CSS, MySQL, REST API

Tools/Others: Linux, Git, GitHub, Thymeleaf, Flowbite, HTML/CSS, Maven, Markdown

ACHIEVEMENTS

- Secured **4th** position in **CODE MENIA 2024**, a coding event held at **Jagran Institute of Management, Kanpur**, among participants from over 10 different colleges. | Link [↗](#)
- Contributed to open-source projects, like adding **partial controller support** to a **python-based** game, fixing and improving **Math** class in **Symbolic PathFinder**. | Link [↗](#)
- Worked for **2 months** with a company on their Ed-Tech Startup website, developing and designing frontend components using **HTML**, **CSS**, **JavaScript**, **Bootstrap**, and **Swiper.js**.
- Served as **Student Coordinator** and **Technical Head**, managing, video editing (**After Effects**, **DaVinci Resolve**, **Clipchamp**), at my college events.
- Undertook **trainings** and **workshops** in technologies like **Java**, **C/C++**, **JavaScript**, from platforms such as **Coursera**, **Internshala Trainings** and others. | Link [↗](#)
- Active member of the developer community **100xDevs - Cohort 3.0**