JASKARAN KLAIR

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EDUCATION

University of Washington   September 2022 - Present

Bachelor of Computer Science and Systems   Expected Graduation: Spring 2027
- GPA of 3.41

PROJECTS

Clock Shop - Java, Object-Oriented Programming, Algorithms, File I/O   2025
- Engineered a 24-hour clock system with strict validation for hours, minutes, and seconds, including comparison and advancement functionalities
- Utilized encapsulation, method decomposition, and modular class interaction to reinforce strong object-oriented design principles
- Structured, layered logic is ideal for modeling systems like control panels, digital timers, or embedded systems

Recursive Math Library - Java, Algorithms, Recursion, Software Design   2024
- Designed a recursion-only mathematical utility class implementing complex operations without loops, imports, or object instantiation
- Showcased deep understanding of recursion, divide-and-conquer problem-solving, and mathematical reasoning in algorithm design
- Followed strict software engineering constraints, emphasizing logical purity, readability, and mathematical accuracy

Skyscraper Puzzle Validator — Java, Algorithms, File I/O, Software Validation   2024
- Developed a Java program to read and validate Skyscraper puzzle configurations from external files using structured grid parsing and clue-based logic
- Utilized object-oriented design principles and modular validation functions (isValid, countVisible, etc.) to improve code readability and maintainability
- Enhanced debugging output through formatted grid printing and dynamic validation reporting

CORE SKILLS

- Java (Proficient) and Python (Intermediate)
- Data Structures & Algorithms (Linked Lists, Sorting, Trees, Recursion)
- Software Design Principles (Encapsulation, Abstraction, Modular Design)
- IntelliJ IDEA, Eclipse, VS Code, JGRASP
- Discrete Mathematics, Logic & Proof Techniques, Computational Problem Solving
- Technical Documentation & Communication
- Attention to Detail & Debugging Accuracy
- Continuous Learning & Adaptability

LANGUAGES

- English
- Punjabi