

SEHAJ PUNIT SINGH

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Education

University of New Mexico

Bachelor of Science in Computer Science

Aug 2017 – May 2022

Albuquerque, NM

Relevant Coursework

- Data Structures
- Algorithms Analysis
- OOPS
- System Design
- Cache Memory
- Database Management
- Discrete Structures
- Computer Architecture

Experience

Sandia National Labs

Software System Engineer

May 2022 – Aug 2024

Livermore, CA

- Architected microservices infrastructure Spring Boot(maven), implementing MVC architecture.
- Led the development of RESTful APIs, adhering to industry best practices, which enhanced API performance by reducing response time by 35%.
- Oversaw relational database management using Oracle database, utilizing Oracle JDBC driver for efficient database access, resulting in a 30% improvement in query performance.
- Implemented multirepo in angular using module federation and CI/CD pipelines resulting in a 42% efficiency in team.
- Secured United States Air Force funding by presenting and enhancing a Unity-based AR/VR prototype application, reducing bugs by 50% through engineered patches, and improving functionality with text updates and keyboard controls.
- Streamlined database operations by 20% through proactive maintenance and performance optimization.
- Active secret-level security clearance, with a proven track record of compliance with federal security protocols.

Twistle

Software Engineer Intern

Jun 2020 – Aug 2020

Albuquerque, NM

- Incorporated metadata into legacy workflows, significantly improving search functionality and enhancing data retrieval efficiency.
- Optimized database performance using Apache Cassandra, improving data handling and storage operations.

Technical Skills

Languages: Java, C#, Python, HTML/CSS, JavaScript, Typescript, SQL

Developer Tools: VS Code, IntelliJ, Google Cloud Platform, Android Studio

Technologies/Frameworks: Spring Boot, .NET Core, React, Angular, Linux, Jenkins, GitHub, JUnit, WordPress

Projects

E-Shop | *Java, Spring Boot, Kubernetes, Docker, Postgres, Swagger*

Aug 2024 – Present

- Developed RESTful APIs for an electronic store, enabling seamless integration with frontend applications.
- Designed and optimized database schema using PostgreSQL to handle complex inventory and customer data efficiently.
- Implemented object-oriented programming practices such as inheritance to create different account types and databases.
- Conducted API documentation using Swagger, improving developer onboarding and reducing integration time.

Scrabble | *Java, Java FX, OOP, Trie DS*

Nov 2021 – Dec 2021

- Implemented a Trie data structure to efficiently manage and search a large dictionary of words for the Scrabble game, ensuring fast and accurate validation of word placements.
- Developed a command-line Word Solver that identifies the highest-scoring move in Scrabble by analyzing board configurations and a given tray of letters using optimized algorithms.
- Created a full two-player Scrabble game using JavaFX for the GUI, allowing human players to compete against a computer opponent with real-time scoring and move validation.
- Designed and tested a computer player AI that uses advanced algorithms to select the best possible moves within a 2-second time frame, enhancing the game's challenge.

Portfolio | *React, JavaScript*

Jan 2021 – Feb 2021

- Developed interactive and responsive web applications using React, implementing reusable components and optimizing performance through efficient state management.
- Implemented modern design principles and CSS frameworks in React projects, delivering visually appealing and user-friendly interfaces.