

# RASHPAL SINGH

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## ***PROFILE***

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- Expertise in Object Oriented Programming Concepts and applicable software design patterns
- Core knowledge of the Software Development Lifecycle (SDLC)
- Solid foundation of Java programming and designing WEB Services
- Working experience in Java projects.

## ***QUALIFICATION***

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### **Masters in Applied Computer Science**

Concordia University,  
Montreal, Quebec, Canada

**Expected - August 2017**

### **Bachelor of Technology (CSE)**

Guru Gobind Singh Indraprastha University, Delhi, India.

**August 2015**

## ***TECHNICAL SKILLS***

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<b>Languages</b>	:	Java(1.7), C++, PHP, JavaScript, CSS, HTML5
<b>Technical Tools</b>	:	GitHub, Eclipse, NetBeans, IntelliJ
<b>Database</b>	:	SQL Server, MySQL
<b>Operating system</b>	:	Windows, Ubuntu, Mac
<b>Frameworks</b>	:	Jersey, Springs, MVC, Hadoop - MapReduce

## ***INTERNATIONAL CERTIFICATIONS***

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- Oracle Certified Associate, Java SE 7 Programmer 9 January 2017
- Oracle Certified Professional, Java SE 7 Programmer 9 January 2017

## ***INTERNSHIP and INTERNATIONAL CERTIFICATIONS***

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### **Web Developer Intern**

*B.M. Embedded Solutions, New Delhi, India*

**(June - July 2014)**

- Was involved in an e-commerce project “**Online Shopping Cart Website**” in PHP, HTML and JavaScript

### **Trainee**

*DUCAT, New Delhi, India*

**(June-July 2013)**

- Developed Application based Project: **Cold Storage Management System** on **CORE JAVA** Technology.

## ***PROJECTS and COURSE WORK***

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### **Phishing Detection using Hadoop - Map/Reduce**

**Summer 2017**

Implemented a project to detect the phishing websites based on one of the attributes in URL in mapper and passing the filtered data to reducer to print the result including the frequency.

**Technology:** J2SE(1.7), Hadoop-MapReduce

**Responsibility Assigned:** Hadoop Configuration, ApplicationDeveloper

### **Levenshtein Distance - Dynamic Programming**

**Winter 2017**

<https://github.com/rashpalgaheer/StringProject>

Dynamic Programming: Algorithm to determine minimum number of operations required to transform one string word into another. Further introduced weight metric for distance between characters on the english keyboard.

**Technology:** J2SE(1.7)

**Responsibility Assigned:** ApplicationDeveloper

### **Othello Board Game - Artificial Intelligence**

**Simple Projects**

<https://github.com/rashpalgaheer/Othello>

Created a Java based game agent by implementing Greedy and Minimax heuristic algorithm to play against human. It also allowed the two agents of the game to play against each other without any human involvement.

**Technology:** J2SE(1.7), Data Structures

**Responsibility Assigned:** ApplicationDeveloper

### **Heuristic Searches - Artificial Intelligence**

**Simple Projects**

[https://github.com/rashpalgaheer/Different\\_Searches.git](https://github.com/rashpalgaheer/Different_Searches.git)

A generic search algorithm that use depth-first, breadth-first, best-first, and A\*. Tested these algorithms to play 8 puzzle game.

**Technology:** J2SE(1.7), Data Structures

**Responsibility Assigned:** ApplicationDeveloper, JUnit Tester

### **Failure Tolerant/Highly Available Distributed Staff Management System**

**Summer 2016**

[https://rashpalgaheer@bitbucket.org/veghiakoronianhighavailability\\_distributedstaffmanagementsystem.git](https://rashpalgaheer@bitbucket.org/veghiakoronianhighavailability_distributedstaffmanagementsystem.git)

Designed a highly available system in Java which tolerates process crashes only (no software bugs) using heartbeat crash detection. Then it elects a new leader using a Bully Algorithm. The leader receives a request, FIFO broadcasts it to all replicas using UDP datagram.

**Technology:** J2SE(1.7), CORBA, UDP/TCP, Concurrency, Springs

**Responsibility Assigned:** UDP/TCP communication, CORBA connection with client

### **Tower Defence Game**

**Winter 2016**

<https://github.com/amnivor/TowerDefense.git>

Build a strategy game using software engineering patterns. Developed Test Cases prior developing the main code. Implemented design patterns include: Observer, Singleton, Factory, Strategy.

**Technology:** J2SE(1.7), Design Patterns, MVC, Unit Testing

**Responsibility Assigned:** ApplicationDeveloper, JUnit Tester

### **Database indexing on large files**

**Winter 2016**

<https://github.com/rashpalgaheer/SecondaryIndex.git>

Created a secondary, dense index of a text file having about 20 billion records. Using this index, it queried the file to respond to specific questions. It uses TPMMS algorithm to index the file by using limited memory space.

**Technology:** J2SE(1.7)

**Responsibility Assigned:** ApplicationDeveloper

### **Data Mining using evolutionary Algorithms in KEEL tool**

**Summer 2015**

This project introduces software tool named KEEL (Knowledge Extraction based on Evolutionary Learning), a software tool to access evolutionary algorithms for Data Mining problems. Many evolutionary algorithms have been implemented on different datasets and their efficiencies are compared for stating which algorithm is best for a particular type of dataset.

## ***Co-Curricular Activities & Achievements***

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- Participated as an EVENT COORDINATOR in event FOLK DANCE during GATES' 13
- Participated as an MEMBER in DISCIPLINE COMMITTEE during GATES' 13.
- Winner of the event named FOLK DANCE at ANUGOONJ' 13.