# PRATIK BHAGWAT

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**Seeking Internship/Full-time opportunities.**

## EXPERIENCE

### Software Engineer

**Larsen & Toubro Infotech**

Feb 2018 - June 2019 Mumbai, India

- Accelerated the invoice generation process and reduced the resource efforts involved at the end of every invoice generation cycle for any contract in the company by designing an invoice generation system.
- Co-developed a contract management system which included development of features like contract generation, contract amendments, milestone monitoring etc. The development involved understanding the SaaS business model and mapping the model onto a robust application.
- Lowered the resource efforts and accelerated the employee allocation process 10 times faster than the existing one by designing and implementing an automation pipeline for employee allocation.
- Integrated software modules, built automation pipelines in the company by developing SOAP and REST micro-services achieving data consistency across all the software modules in the company.

### Teaching Assistant

**Rochester Institute Of Technology**

August 2020 - December 2020 Rochester, NY

- Subject :(CSCI-603) Computational Problem Solving.
- Assisted professor for grading the labs and exams written by students.
- Conducted weekly office hours to solve questions regarding the assignment and coursework for students.

## SKILLS

**Languages:** Java, Python, JavaScript, C++, SAP ABAP .
**Web Technologies and Tools:** HTML, CSS, Jquery, NodeJs, Bootstrap, Form Calc, Selenium, Django, Docker, MPI, GCP.
**Programming Paradigms:** Object Oriented, Functional, Procedural.
**Databases:** MySQL, SAP HANA, MongoDB.
**Build and VCS Tools:** Gradle, Git, Github.
**Core Computer Science Concepts:** Algorithms, Data Structures, Problem Solving, Machine Learning, Data Management, Computer Networks, Parallel and Distributed Computing, Design Patterns.

## EDUCATION

### Master of Science : Computer Science

**Rochester Institute of Technology**

Aug 2019 - Dec 2021 CGPA: **3.86/4**

### Bachelor of Engineering : Electronics and Telecommunication Engineering

**University of Mumbai**

August 2013 - May 2017 CGPA: **6.97/10**

## ACADEMIC ACHIEVEMENTS

- Qualified for the ACM-ICPC (Association for Computing Machinery - International Collegiate Programming Contest) regionals from Rochester Institute of technology.

## PROJECTS

### Intelligent Systems

**Intelligent Product recommendation system (Python, Pandas, Numpy, SKLearn, Matplotlib, NLTK)**

- Developed an intelligent system to recommend the products based on the search done by the user using NLP concepts of TF/IDF, Word2Vec to get the recommendations based on the title, brand, color description and vgg16 model to get the recommendation based on the image of the product.

**Intelligent path finder with visualization (Python, PIL, CV2)**

- Implemented an A* algorithm on a topological map consisting of elevations and terrains like water, road, forest, mountains, accounting for different seasons of the year in the algorithm.
- Generated a video which visualizes the algorithm in action.

**Analysis of NYSE stocks (Python, Pandas, Numpy)**

- Predicted the stock prices with 95% accuracy using neural network models.
- Generated association rules based on rising and falling trend of stocks using Apriori algorithm for item-set mining.

### Database and Distributed Computing

**Routing and Reliable Data Transfer over UDP (JAVA,Docker,NodeJS)**

- Implemented RIPv2 routing protocol and tested the routing mechanism by deploying a VM network on docker.
- Designed a Reliable data transfer protocol over UDP and Tested the protocol using multiple Docker instances.

**Relational and NoSQL Database Application Comparison (JAVA,JDBC,MySQL,MongoDb)**

- Implemented a thread safe application with multiple isolation levels for inventory management of a local store using MySql and MongoDB.
- Compared the performance of both databases with respect to throughput, latency and ACID properties.

**Cannon's Matrix Multiplication using MPI (JAVA)**

- Implemented Cannon's Algorithm for multiplying matrices parallelly by message passing paradigm of parallel computing using JAVA OPEN-MPI.
- Tested the program for multiple Matrix Sizes up to 8192 dimensions for calculating the performance gain.

**Optimal Binary search Tree (Parallel Implementation)**

- Implemented a parallel algorithm to generate Optimal Binary Search Tree using Shared Memory paradigm of parallel computing and tested the program for multiple input sizes upto 5000 keys and frequencies.