SHOBHIT GARG

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Skills

AREAS OF EXPERTISE
Computational Problem Solving
Data Structures
Algorithms
Object Oriented Design
Data Analytics
Machine Learning

PROGRAMMING LANGUAGES
Java
Python
Lua
JavaScript
Matlab
C++
HTML

DATABASES
MySQL
MongoDB
Neo4j (Graph DB)

OPERATING SYSTEMS
Windows
Mac OS
Linux

Education

Rochester Institute Of Technology, NY | Expected July 2018
Masters of Science Computer Science
GPA: 3.55/4
Coursework: Algorithms and Data Structures, Problem Solving, Artificial Intelligence, Computer Networks, Computer Vision, Data Analytics, Distributed Systems, Graph Databases

Bharati Vidyapeeth, Pune, India
Bachelor Of Technology Computer Engineering 2013
GPA: 3/4
Key Courses: Algorithms, Operating Systems, Object Oriented Design, Computer Architecture, Web Development, Databases

Employment

Esri — Redlands, California
Student Intern — Jun 2017 to Aug 2017
Worked with the Software Products Division team to create an automation framework using Python and selenium. Modified the Python HTMLTestRunner and Unittest API's to add the support for taking the screenshots in the event of test execution failure and embed it into the HTML Test Reports. Also integrated the suite with Jenkins to create automated jobs to test various ArcGIS Online products.

Alstom Signaling — Rochester, New York
Summer Intern — Jun 2016 to Aug 2016
Created a Standalone desktop application to dissect Wireshark Capture files using Java. Used Java FX for GUI development. Also, created Wireshark dissectors for Alstom Protocols and MODBUS serial communication protocol which increased the efficiency when dealing with huge amounts of data by ~65%. Used Lua for developing the dissectors.

Accenture Services — Bangalore, India
Associate Software Engineer — Jan 2014 to Jun 2015
Created automation scripts using Java for Thomas Trains and American Girl brand website of Mattel Inc. Used Java/Selenium to create the automation suite. Performed improvements based on bi-weekly discussions with the clients to support their needs. Mentored a team of six people to venture into automation testing.

Projects

DISTRIBUTED WIKIPEDIA FOR RIT — Apr 2017 to May 2017
Implemented a distributed wikipedia for RIT that incorporates replication, fault tolerance and scalability to provide for a reliable system. To manage the backend, I used MySQL database and implemented the replication properties of Cassandra to maintain a consistent data store that provides service even in the event of failure of an individual node. The data of each node is replicated to its right neighbor. Implemented an entry point server to assist new node in joining the backend and share the address space. Used docker to provide for platform independence. The system was designed in a way to support any number of nodes for backend, however tested the solution using seven backend nodes. The front end of the application was developed in Django python. Used java to implement the solution.

OPTIMIZED SUBGRAPH MATCHING IN GRAPH DATABASES — Apr 2017
Implemented subgraph matching algorithm in Graph Databases to find the occurrence of particular patterns in huge graphs. Used neighborhood profiling for reducing the search space. Also implemented dynamic and optimized search order calculation to improve the performance of subgraph matching. Used java and Neo4j to implement the solution.

MULTI PERSON VIDEO CONFERENCING APPLICATION — Dec 2016
Created a multi-person video conferencing application using Python to enable communication between multiple users simultaneously. Used OpenCV framework for capturing video from the webcam. Used client-server architecture along with multi-threading to stream video data across multiple clients simultaneously.

SORTING METAL PARTS USING MACHINE LEARNING — Nov 2016
Implemented a multi-layered neural network and decision tree with Chi-Square pruning to classify different metal parts. To train the neural network, used back propagation to minimize the error rate. Used a data-set consisting of different attributes of the metals (example size, radius etc.) to train and test the model. Used python to implement the solution.

Awards

Employee Recognition Award
Received twice while working with Accenture to reward my high performance and mentorship skills.

Participated in the Esri Intern Hackathon — Jun 2017
Participated in the Esri Intern Hackathon and created a widget for ArcGIS Pro that could be used to handle real time data streams to record the data and process it. Used Arcpy API to create rasters from the recorded data and combine them to display them on the map. A possible use case of the widget was tracing the source of pollution by tracking its movement backwards in time using the combined rasters. Won the Best Pitch award for the project.