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ABSTRACT

The main theme of this project is implementation of the distributed computing for the large dataset.The project focused on the analysis of H1B visa data.Using Hadoop, an open source framework for distributed computing, the raw data of the H1B visa are processed and analyzed.

INTRODUCTION

The H1B is an employment-based, non-immigrant visa category for temporary foreign workers in the United States. For a foreign national to apply for H1B visa, an US employer must offer a job and petition for H1B visa with the US immigration department. This is the most common visa status applied for and held by international students once they complete college/ higher education (Masters, Ph.D.) and work in a full-time position.We will be performing analysis on the H1B visa applicants between the years 2011-2016.

The system would use Hadoop as its big data framework. Though the analysis can be

done using the traditional RDBMS as well, but since the data is big using RDBMS the total time of analysis would be 10 times more than Hadoop. The analysis tool which the system would be using is MapReduce, Hive, Pig.

. **What is an H1B Visa ?**

The H1B visa program is the primary method for employers to recruit & hire International professionals and International students to work in the USA. The H1B visa enables US employers to hire foreign professionals for a specified period of time. The H1B program allows workers in specialty occupations to work in the US for up to a total of six (6) years.

One of the things that makes the H1B so desirableis that, unlike many other nonimmigrant visa categories, it is a "dual intent" visa. This means that a visa will not be denied simply because a person has intentions to become a permanent resident. The assumption is that if for some reason the permanent residency petition is denied, the person would still have the intention to return home.

Aside from documenting that the position offered is in a specialty occupation and that the employee has the appropriate credentials for the job, the employer needs to verify that the H1B visa worker is being paid the prevailing wage for the work being performed and that employment of a foreign worker is not harming conditions for US workers.   
  
 **H1B Visa Qualifying occupation** categories are typically jobs in the fields of IT, Computing, Finance, Accounting, Banking, Marketing, Advertising, PR, Sales, Recruiting, Engineering (all types), Teaching, HealthCare/Medical, Legal, Lawyers, Networking, Telecoms, Business,Management,ScientificResearch. 

The length of time that a worker can have an H1B visa is usually an 'initial' period of up to three years. The initial H1B visa can then be extended one time for up to a combined total of six (6) years.  
Other regulatory provisions permit;  
(1) the employer to request a period of less than three years,  
(2) the employee to be employed on a part-time basis  
(3) the employee to work for more than one US Employer simultaneously

**WHAT IS BIG DATA?**

Big data means really a big data, it is a collection of large datasets that cannot be processed using traditional computing techniques. Normally we work on data of size MB(WordDoc ,Excel) or maximum GB(Movies, Codes) but data in Peta bytes i.e. 10^15 byte size is called Big Data.These data come from many sources like

1. Social networking sites: Facebook, Google, LinkedIn all these sites generates huge amount of

data on a day to day basis as they have billions of users worldwide.

2. E-commerce site: Sites like Amazon, Flipkart, Alibaba generates huge amount of logs from

which users buying trends can be traced.

3. Weather Station: All the weather station and satellite gives very huge data which are stored and manipulated to forecast weather.

4. Telecom company: Telecom giants like Airtel, Vodafone study the user trends and accordingly publish their plans and for this they store the data of its million users.

5. Share Market: Stock exchange across the world generates huge amount of data through its daily transaction.

6. Search Engine Data: Search engines retrieve lots of data from different databases.

The data will be of three types.

•**Structured data**: Relational data.

•**Semi Structured data**: XML data.

•**Unstructured data**: Word, PDF, Text, Media Logs.

**The 5 v’s of Big Data are** -

Velocity : The data is increasing at a very fast rate.

Variety : There are different types of data structured ,semi structued and unstructured.

Volume :The amount of data which we deal with is of very large size of Peta bytes.

Veracity : Quality and accuracy of data. It is also means Incompletness of data.

Value : Having access to big datais no good unless we can turn it into value.

**WHAT IS HADOOP?**

Hadoop is an open-source software framework for storing data and running applications on clusters of commodity hardware. It provides massive storage for any kind of data, enormous processing power and the ability to handle virtually limitless concurrent tasks or jobs.

**WHY HADOOP?**

As the system involves census data analysis, the amount of raw census data that would be evaluated for insights will be very large. Thus, the involvement of very large data for analysis urges to the use of Hadoop framework for data analysis. Though the data analysis can be done with traditional RDBMS system as well but since the data is very large, the time required for analysis would be very long. The use of Hadoop framework for the data analysis incurs many benefits:

**Scalable** - New nodes can be added as needed and added without needing to changedata formats, how data is loaded, how jobs are written, or the applications on top.

**Cost effective** - Hadoop brings massively parallel computing to commodity servers.The result is a sizeable decrease in the cost per terabyte of storage, which in turnmakes it affordable to model all your data.

**Flexible** - Hadoop is schema-less, and can absorb any type of data, structured ornot, from any

number of sources. Data from multiple sources can be joined andaggregated in arbitrary ways

enabling deeper analyses than any one system canprovide.

**Fault tolerant** - When you lose a node, the system redirects work to anotherlocation of the data and continues processing without missing a beat.

**HADOOP ARCHITECTURE**

**Hadoop:**

Hadoop is an open source framework, that supports the processing of large data sets in a distributed and computing environment. Hadoop consists of MapReduce, the Hadoop distributed file system (HDFS) and a number of related projects such as Apache Hive, HBase and Zookeeper.

MapReduce and Hadoop distributed file system (HDFS) are the main component of Hadoop. Hdfs used for storage and Mapreduce is for processing.

Hadoop Cluster :- Normally any set of loosely connected or tightly connected computers that work together as a single system is called Cluster. In simple words, a computer cluster used for Hadoop is called hadoop cluster.

Hadoop cluster has 3 components:

1. Client

2. Master

3. Slave



**Client** :- It is neither master nor slave, rather play a role of loading the data into cluster, submit

MapReduce jobs describing how the data should be processed and then retrieve the data to see the response after job completion.

**Masters** :- The Masters consists of 3 components NameNode, Secondary Node name and

JobTracker.

**NameNode** :- NameNode does NOT store the files but only the file's metadata. In later section we will see it is actually the DataNode which stores the files.

NameNode oversees the health of DataNode and coordinates access to the data stored in DataNode.

Name node keeps track of all the file system related information such as to

•Which section of file is saved in which part of the cluster

•Last access time for the files

•User permissions like which user have access to the file

**JobTracker** :- JobTracker coordinates the parallel processing of data using MapReduce.

Secondary Name Node :-The job of Secondary Node is to contact NameNode in a periodic manner after certain time interval(by default 1 hour).

NameNode which keeps all filesystem metadata in RAM has no capability to process that metadata on to disk. So if NameNode crashes, you lose everything in RAM itself and you don't have any backup of filesystem. What secondary node does is it contacts NameNode in an hour and pulls copy of metadata information out of NameNode. It shuffle and merge this information into clean file folder and sent to back again to NameNode, while keeping a copy for itself. Hence Secondary Node is not the backup rather it does job of housekeeping.

In case of NameNode failure, saved metadata can rebuild it easily.

**Slaves** :- Slave nodes are the majority of machines in Hadoop Cluster and are responsible to

•Store the data

•Process the computation

Each slave runs both a DataNode and Task Tracker daemon which communicates to their masters.The Task Tracker daemon is a slave to the JobTracker and the DataNode daemon a slave to the NameNode.

**TOOLS USED**

1. **MAPREDUCE**

MapReduce is a processing technique and a program model for distributed

computing based on java. The MapReduce algorithm contains two important tasks, namely Map

and Reduce. Map takes a set of data and converts it into another set of data, where individual

elements are broken down into tuples (key/value pairs). Secondly, reduce task, which takes the

output from a map as an input and combines those data tuples into a smaller set of tuples. As the

sequence of the name MapReduce implies, the reduce task is always performed after the map job.

1. **HIVE**

Hive is a data warehouse infrastructure tool to process structured data in Hadoop. It

resides on top of Hadoop to summarize Big Data, and makes querying and analyzing easy.

Initially Hive was developed by Facebook, later the Apache Software Foundation took it up and

developed it further as an open source under the name Apache Hive. It is used by different

companies. For example, Amazon uses it in Amazon Elastic MapReduce.

1. **PIG**

Apache Pig is an abstraction over MapReduce. It is a tool/platform which is used to

analyze larger sets of data representing them as data flows. Pig is generally used with Hadoop; we can perform all the data manipulation operations in Hadoop using Apache Pig.To analyze data using Apache Pig, programmers need to write scripts using Pig Latin language. All these scripts are internally converted to Map and Reduce tasks. Apache Pig has a component known as Pig Engine that accepts the Pig Latin scripts as input and converts those scripts into MapReduce jobs.

**DATA GIVEN**

The dataset has nearly 3 million records.

The dataset description is as follows:

The columns in the dataset include:

* CASE\_STATUS: Status associated with the last significant event or decision. Valid values include “Certified,” “Certified-Withdrawn,” Denied,” and “Withdrawn”.

Certified: Employer filed the LCA, which was approved by DOL

Certified Withdrawn: LCA was approved but later withdrawn by employer

Withdrawn: LCA was withdrawn by employer before approval

Denied: LCA was denied by DOL

* EMPLOYER\_NAME: Name of employer submitting labour condition application.
* SOC\_NAME: the Occupational name associated with the SOC\_CODE. SOC\_CODE is the occupational code associated with the job being requested for temporary labour condition, as classified by the Standard Occupational Classification (SOC) System.
* JOB\_TITLE: Title of the job
* FULL\_TIME\_POSITION: Y = Full Time Position; N = Part Time Position
* PREVAILING\_WAGE: Prevailing Wage for the job being requested for temporary labour condition. The wage is listed at annual scale in USD. The prevailing wage for a job position is defined as the average wage paid to similarly employed workers in the requested occupation in the area of intended employment. The prevailing wage is based on the employer’s minimum requirements for the position.
* YEAR: Year in which the H1B visa petition was filed
* WORKSITE: City and State information of the foreign worker’s intended area of employment
* lon: longitude of the Worksite
* lat: latitude of the Worksite

**Queries and answers by using MapReduce,Hive and Pig :**

**1**a) Is the number of petitions with Data Engineer job title increasing over time?

Using MapReduce

**Output**:

Data Engineer Average Growth For Five Years 68.809146570357

**1**b) Find top 5 job titles who are having highest avg growth in applications.[ALL]

Using Pig

**Output:**

SENIOR SYSTEMS ANALYST JC60 4255.4%

SOFTWARE DEVELOPER 2 3480.8%

PROJECT MANAGER 3 3233.4%

SYSTEMS ANALYST JC65 2985.0%

MODULE LEAD 2917.2%

**2** a) Which part of the US has the most Data Engineer jobs for each year?

Using Hive

**Output:**

In 2011:

2011,SEATTLE, WASHINGTON,19

In 2012:

2012,SEATTLE, WASHINGTON,26

In 2013:

2013,SEATTLE, WASHINGTON,43

In 2014:

2014,SEATTLE, WASHINGTON,42

In 2015:

2015,SEATTLE, WASHINGTON,60

In 2016:

2016,SEATTLE, WASHINGTON,121

2 b) find top 5 locations in the US who have got certified visa for each year.[certified]

**Output:**

In 2011:

(NEW YORK, NEW YORK,CERTIFIED,2011) 23172

(HOUSTON, TEXAS,CERTIFIED,2011) 8184

(CHICAGO, ILLINOIS,CERTIFIED,2011) 5188

(SAN JOSE, CALIFORNIA,CERTIFIED,2011) 4713

(SAN FRANCISCO, CALIFORNIA,CERTIFIED,2011) 4711

In 2012:

(NEW YORK, NEW YORK,CERTIFIED,2012) 23737

(HOUSTON, TEXAS,CERTIFIED,2012) 9963

(SAN FRANCISCO, CALIFORNIA,CERTIFIED,2012) 6116

(CHICAGO, ILLINOIS,CERTIFIED,2012) 5671

(ATLANTA, GEORGIA,CERTIFIED,2012) 5565

In 2013:

(NEW YORK, NEW YORK,CERTIFIED,2013) 23537

(HOUSTON, TEXAS,CERTIFIED,2013) 11136

(SAN FRANCISCO, CALIFORNIA,CERTIFIED,2013) 7281

(SAN JOSE, CALIFORNIA,CERTIFIED,2013) 6722

(ATLANTA, GEORGIA,CERTIFIED,2013) 6377

In 2014:

(NEW YORK, NEW YORK,CERTIFIED,2014) 27634

(HOUSTON, TEXAS,CERTIFIED,2014) 13360

(SAN FRANCISCO, CALIFORNIA,CERTIFIED,2014) 9798

(SAN JOSE, CALIFORNIA,CERTIFIED,2014) 8223

(ATLANTA, GEORGIA,CERTIFIED,2014) 8213

In 2015:

(NEW YORK, NEW YORK,CERTIFIED,2015) 31266

(HOUSTON, TEXAS,CERTIFIED,2015) 15242

(SAN FRANCISCO, CALIFORNIA,CERTIFIED,2015) 12594

(ATLANTA, GEORGIA,CERTIFIED,2015) 10500

(SAN JOSE, CALIFORNIA,CERTIFIED,2015) 9589

In 2016:

(NEW YORK, NEW YORK,CERTIFIED,2016) 34639

(SAN FRANCISCO, CALIFORNIA,CERTIFIED,2016) 13836

(HOUSTON, TEXAS,CERTIFIED,2016) 13655

(ATLANTA, GEORGIA,CERTIFIED,2016) 11678

(CHICAGO, ILLINOIS,CERTIFIED,2016) 11064

3.Which industry(SOC\_NAME) has the most number of Data Scientist positions?

[certified]

**Output:**

STATISTICIANS,572

4.Which top 5 employers file the most petitions each year? - Case Status - ALL

**Output:**

In 2011:

2011,TATA CONSULTANCY SERVICES LIMITED,5416

2011,MICROSOFT CORPORATION,4253

2011,DELOITTE CONSULTING LLP,3621

2011,WIPRO LIMITED,3028

2011,COGNIZANT TECHNOLOGY SOLUTIONS U.S. CORPORATION,2721

In 2012:

2012,INFOSYS LIMITED,15818

2012,WIPRO LIMITED,7182

2012,TATA CONSULTANCY SERVICES LIMITED,6735

2012,DELOITTE CONSULTING LLP,4727

2012,IBM INDIA PRIVATE LIMITED,4074

In 2013:

2013,INFOSYS LIMITED,32223

2013,TATA CONSULTANCY SERVICES LIMITED,8790

2013,WIPRO LIMITED,6734

2013,DELOITTE CONSULTING LLP,6124

2013,ACCENTURE LLP,4994

In 2014:

2014,INFOSYS LIMITED,23759

2014,TATA CONSULTANCY SERVICES LIMITED,14098

2014,WIPRO LIMITED,8365

2014,DELOITTE CONSULTING LLP,7017

2014,ACCENTURE LLP,5498

In 2015:

2015,INFOSYS LIMITED,33245

2015,TATA CONSULTANCY SERVICES LIMITED,16553

2015,WIPRO LIMITED,12201

2015,IBM INDIA PRIVATE LIMITED,10693

2015,ACCENTURE LLP,9605

In 2016:

2016,INFOSYS LIMITED,25352

2016,CAPGEMINI AMERICA INC,16725

2016,TATA CONSULTANCY SERVICES LIMITED,13134

2016,WIPRO LIMITED,10607

2016,IBM INDIA PRIVATE LIMITED,9787

5. Find the most popular top 10 job positions for H1B visa applications for each year?

a) for all the applications

**Output:**

In 2011:

2011,PROGRAMMER ANALYST,31799

2011,SOFTWARE ENGINEER,12763

2011,COMPUTER PROGRAMMER,8998

2011,SYSTEMS ANALYST,8644

2011,BUSINESS ANALYST,3891

2011,COMPUTER SYSTEMS ANALYST,3698

2011,ASSISTANT PROFESSOR,3467

2011,PHYSICAL THERAPIST,3377

2011,SENIOR SOFTWARE ENGINEER,2935

2011,SENIOR CONSULTANT,2798

In 2012:

2012,PROGRAMMER ANALYST,33066

2012,SOFTWARE ENGINEER,14437

2012,COMPUTER PROGRAMMER,9629

2012,SYSTEMS ANALYST,9296

2012,BUSINESS ANALYST,4752

2012,COMPUTER SYSTEMS ANALYST,4706

2012,SOFTWARE DEVELOPER,3895

2012,PHYSICAL THERAPIST,3871

2012,ASSISTANT PROFESSOR,3801

2012,SENIOR CONSULTANT,3737

In 2013:

2013,PROGRAMMER ANALYST,33880

2013,SOFTWARE ENGINEER,15680

2013,COMPUTER PROGRAMMER,11271

2013,SYSTEMS ANALYST,8714

2013,TECHNOLOGY LEAD - US,7853

2013,TECHNOLOGY ANALYST - US,7683

2013,BUSINESS ANALYST,5716

2013,COMPUTER SYSTEMS ANALYST,5043

2013,SOFTWARE DEVELOPER,5026

2013,SENIOR CONSULTANT,4326

In 2014:

2014,PROGRAMMER ANALYST,43114

2014,SOFTWARE ENGINEER,20500

2014,COMPUTER PROGRAMMER,14950

2014,SYSTEMS ANALYST,10194

2014,SOFTWARE DEVELOPER,7337

2014,BUSINESS ANALYST,7302

2014,COMPUTER SYSTEMS ANALYST,6821

2014,TECHNOLOGY LEAD - US,5057

2014,TECHNOLOGY ANALYST - US,4913

2014,SENIOR CONSULTANT,4898

In 2015:

2015,PROGRAMMER ANALYST,53436

2015,SOFTWARE ENGINEER,27259

2015,COMPUTER PROGRAMMER,14054

2015,SYSTEMS ANALYST,12803

2015,SOFTWARE DEVELOPER,10441

2015,BUSINESS ANALYST,8853

2015,TECHNOLOGY LEAD - US,8242

2015,COMPUTER SYSTEMS ANALYST,7918

2015,TECHNOLOGY ANALYST - US,7014

2015,SENIOR SOFTWARE ENGINEER,6013

In 2016:

2016,PROGRAMMER ANALYST,53743

2016,SOFTWARE ENGINEER,30668

2016,SOFTWARE DEVELOPER,14041

2016,SYSTEMS ANALYST,12314

2016,COMPUTER PROGRAMMER,11668

2016,BUSINESS ANALYST,9167

2016,COMPUTER SYSTEMS ANALYST,6900

2016,SENIOR SOFTWARE ENGINEER,6439

2016,DEVELOPER,6084

2016,TECHNOLOGY LEAD - US,5410

5. Find the most popular top 10 job positions for H1B visa applications for each year?

b) for only certified applications.

**Output:**

In 2011:

2011,PROGRAMMER ANALYST,28806

2011,SOFTWARE ENGINEER,11224

2011,COMPUTER PROGRAMMER,8038

2011,SYSTEMS ANALYST,7850

2011,BUSINESS ANALYST,3444

2011,COMPUTER SYSTEMS ANALYST,3152

2011,ASSISTANT PROFESSOR,3050

2011,PHYSICAL THERAPIST,2911

2011,SENIOR SOFTWARE ENGINEER,2595

2011,SENIOR CONSULTANT,2585

In 2012:

2012,PROGRAMMER ANALYST,29226

2012,SOFTWARE ENGINEER,12273

2012,COMPUTER PROGRAMMER,8483

2012,SYSTEMS ANALYST,8399

2012,BUSINESS ANALYST,4144

2012,COMPUTER SYSTEMS ANALYST,4084

2012,SENIOR CONSULTANT,3420

2012,SOFTWARE DEVELOPER,3290

2012,PHYSICAL THERAPIST,3284

2012,ASSISTANT PROFESSOR,3033

In 2013:

2013,PROGRAMMER ANALYST,29906

2013,SOFTWARE ENGINEER,12973

2013,COMPUTER PROGRAMMER,10202

2013,SYSTEMS ANALYST,7850

2013,TECHNOLOGY LEAD - US,7809

2013,TECHNOLOGY ANALYST - US,7641

2013,BUSINESS ANALYST,4993

2013,COMPUTER SYSTEMS ANALYST,4554

2013,SOFTWARE DEVELOPER,4316

2013,SENIOR CONSULTANT,3996

In 2014:

2014,PROGRAMMER ANALYST,38625

2014,SOFTWARE ENGINEER,17278

2014,COMPUTER PROGRAMMER,13796

2014,SYSTEMS ANALYST,9161

2014,BUSINESS ANALYST,6529

2014,SOFTWARE DEVELOPER,6473

2014,COMPUTER SYSTEMS ANALYST,6204

2014,TECHNOLOGY LEAD - US,5055

2014,TECHNOLOGY ANALYST - US,4911

2014,SENIOR CONSULTANT,4535

In 2015:

2015,PROGRAMMER ANALYST,48203

2015,SOFTWARE ENGINEER,23352

2015,COMPUTER PROGRAMMER,12971

2015,SYSTEMS ANALYST,11498

2015,SOFTWARE DEVELOPER,9343

2015,TECHNOLOGY LEAD - US,8238

2015,BUSINESS ANALYST,7919

2015,COMPUTER SYSTEMS ANALYST,7234

2015,TECHNOLOGY ANALYST - US,7009

2015,SENIOR SOFTWARE ENGINEER,5324

In 2016:

2016,PROGRAMMER ANALYST, 47964

2016,SOFTWARE ENGINEER, 25890

2016,SOFTWARE DEVELOPER, 12474

2016,SYSTEMS ANALYST, 10986

2016,COMPUTER PROGRAMMER, 10528

2016,BUSINESS ANALYST, 8175

2016,COMPUTER SYSTEMS ANALYST, 6205

2016,DEVELOPER, 5912

2016,SENIOR SOFTWARE ENGINEER, 5630

2016,TECHNOLOGY LEAD - US, 5405

6. Find the percentage and the count of each case status on total applications for each year. Create a line graph depicting the pattern of All the cases over the period of time.

**Output:**

2011 DENIED 29130 358767 8.0%

2011 CERTIFIED 307936 358767 85.0%

2011 WITHDRAWN 10105 358767 2.0%

2011 CERTIFIED-WITHDRAWN 11596 358767 3.0%

2012 DENIED 21096 415607 5.0%

2012 CERTIFIED 352668 415607 84.0%

2012 WITHDRAWN 10725 415607 2.0%

2012 CERTIFIED-WITHDRAWN 31118 415607 7.0%

2013 CERTIFIED-WITHDRAWN 35432 442114 8.0%

2013 WITHDRAWN 11590 442114 2.0%

2013 CERTIFIED 382951 442114 86.0%

2013 DENIED 12141 442114 2.0%

2014 CERTIFIED-WITHDRAWN 36350 519427 6.0%

2014 WITHDRAWN 16034 519427 3.0%

2014 CERTIFIED 455144 519427 87.0%

2014 DENIED 11899 519427 2.0%

2015 DENIED 10923 618727 1.0%

2015 CERTIFIED 547278 618727 88.0%

2015 WITHDRAWN 19455 618727 3.0%

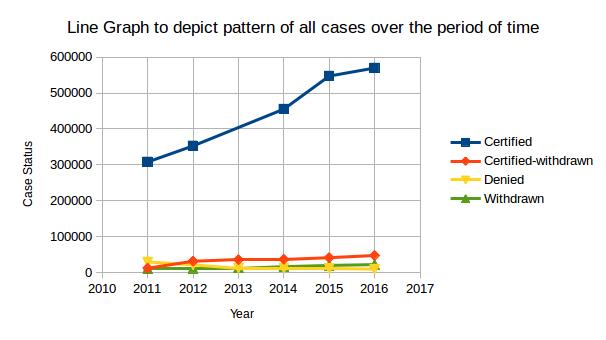
2015 CERTIFIED-WITHDRAWN 41071 618727 6.0%

2016 CERTIFIED 569646 647803 87.0%

2016 WITHDRAWN 21890 647803 3.0%

2016 CERTIFIED-WITHDRAWN 47092 647803 7.0%

2016 DENIED 9175 647803 1.0%



7. Create a bar graph to depict the number of applications for each year [All]

**Output:**

2011 358767

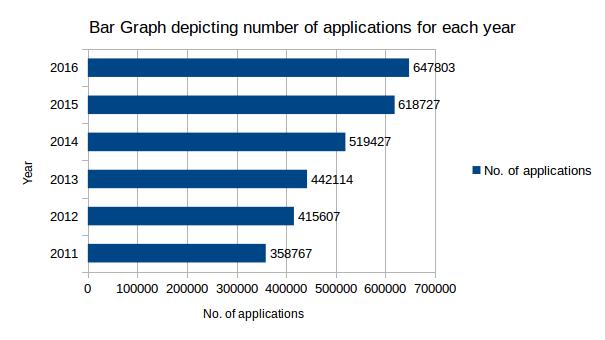
2012 415607

2013 442114

2014 519427

2015 618727

2016 647803



8. Find the average Prevailing Wage for each Job for each Year (take part time and full time separate). Arrange the output in descending order - [Certified and Certified Withdrawn.]

**Output:**

Sample output data:

65645.0,(1,2015,Y)

64147.0,(P,2015,Y)

143915.0,(MD,2015,Y)

91749.0,(ME,2015,Y)

53414.67,(QA,2015,Y)

73861.0,(ART,2015,Y)

125784.65,(CEO,2015,Y)

123584.57,(CFO,2015,Y)

129209.5,(COO,2015,Y)

158103.86,(CTO,2015,Y)

63047.0,(DBA,2015,Y)

64480.0,(EIT,2015,Y)

61422.0,(ETL,2015,Y)

110053.0,(GSM,2015,Y)

91749.0,(MQE,2015,Y)

64425.0,(PGY,2015,Y)

62504.0,(PMO,2015,Y)

57408.0,(PRO,2015,Y)

45885.0,(RES,2015,Y)

46904.0,(SAP,2015,Y)

71469.0,(TAS,2015,Y)

42130.0,(TEA,2015,Y)

48110.0,(.NET,2015,Y)

37088.4,(CHEF,2015,Y)

57506.75,(H-1B,2015,Y)

62980.17,(LEAD,2015,Y)

54623.0,(PGY1,2015,Y)

56872.0,(PGY2,2015,Y)

58955.0,(PGY3,2015,Y)

61634.0,(PGY4,2015,Y)

9.Which are the employers along with the number of petitions who have the success rate more than 70% in petitions. (total petitions filed 1000 OR more than 1000) ?

**Output:**

THE UNIVERSITY OF IOWA,1569,70.55 %

VERINON TECHNOLOGY SOLUTIONS LTD.,1245,70.92 %

SUNERA TECHNOLOGIES, INC,1440,71.67 %

DEUTSCHE BANK SECURITIES INC.,1170,71.88 %

GENERAL HOSPITAL CORPORATION,1429,72.29 %

EMORY UNIVERSITY,1680,72.56 %

CITIBANK, N.A.,2173,72.62 %

COLUMBIA UNIVERSITY,1841,73.44 %

WASHINGTON UNIVERSITY IN ST. LOUIS,1576,73.48 %

UNIVERSITY OF MARYLAND COLLEGE PARK,1354,73.49 %

MEDTRONIC, INC.,1050,73.52 %

THE UNIVERSITY OF CHICAGO,1277,73.61 %

T-MOBILE USA, INC.,1457,73.78 %

UNIVERSITY OF UTAH,1069,73.90 %

UNIVERSITY OF CALIFORNIA, DAVIS,1334,74.14 %

THE UNIV. OF ALA. AT BIRMINGHAM (UAB),1288,74.15 %

NEW YORK UNIVERSITY SCHOOL OF MEDICINE,1126,74.25 %

YAHOO! INC.,3348,74.28 %

GLOBALFOUNDRIES U.S. INC.,1391,74.69 %

GOOGLE INC.,16473,74.99 %

UNIVERSITY OF MICHIGAN,2893,75.67 %

INTONE NETWORKS INC.,1575,75.94 %

UNIVERSITY OF WISCONSIN-MADISON,1115,75.96 %

SCHLUMBERGER TECHNOLOGY CORPORATION,2310,76.02 %

NORTHWESTERN UNIVERSITY,1439,76.23 %

BROADCOM CORPORATION,2862,76.24 %

BRIGHAM AND WOMEN'S HOSPITAL,1117,76.45 %

SYMANTEC CORPORATION,2290,77.34 %

SEARS HOLDINGS MANAGEMENT CORPORATION,1105,77.65 %

DUKE UNIVERSITY AND MEDICAL CENTER,1330,77.74 %

BLACKROCK FINANCIAL MANAGEMENT, INC.,1048,77.77 %

MICRON TECHNOLOGY, INC.,1934,78.08 %

UNIVERSITY OF FLORIDA,1429,78.80 %

IBM CORPORATION,13276,79.26 %

HITACHI CONSULTING CORPORATION,2854,79.26 %

YALE UNIVERSITY,1852,79.27 %

JOHNS HOPKINS UNIVERSITY,1823,80.14 %

CUMMINS INC.,4737,80.16 %

NETAPP, INC.,1870,80.21 %

HOWARD HUGHES MEDICAL INSTITUTE,1135,80.88 %

TEXAS INSTRUMENTS INCORPORATED,1780,81.01 %

IBM INDIA PRIVATE LIMITED,34219,81.08 %

UNIVERSITY OF PITTSBURGH,1632,81.13 %

HORIZON TECHNOLOGIES INC,1731,81.57 %

DELL MARKETING L.P.,1532,81.59 %

ORACLE FINANCIAL SERVICES SOFTWARE, INC.,1532,81.72 %

PERSISTENT SYSTEMS, INC.,3225,81.80 %

SMARTPLAY, INC.,1377,81.84 %

UNIVERSITY OF CALIFORNIA, SAN DIEGO,1202,82.28 %

QUALCOMM ATHEROS, INC.,1274,82.34 %

AVANT HEALTHCARE PROFESSIONALS,1006,82.50 %

AKAMAI TECHNOLOGIES, INC.,1092,82.60 %

CITRIX SYSTEMS, INC.,1044,82.66 %

MASTECH, INC., A MASTECH HOLDINGS, INC. COMPANY,5228,82.75 %

IDEXCEL, INC.,1360,82.94 %

LINKEDIN CORPORATION,2194,83.00 %

IBM INDIA PVT. LTD.,1284,83.10 %

APEX TECHNOLOGY SYSTEMS, INC,1060,83.30 %

INTRAEDGE, INC.,1254,83.41 %

QUALCOMM TECHNOLOGIES, INC.,6113,83.67 %

CHARTER GLOBAL, INC.,1188,83.84 %

EXPEDIA, INC.,1311,83.98 %

RJT COMPUQUEST, INC.,1662,84.24 %

ORACLE AMERICA, INC.,7684,84.45 %

HCL GLOBAL SYSTEMS INC,3677,84.58 %

SIRI INFOSOLUTIONS INC.,1039,84.79 %

UNIVERSITY OF WASHINGTON,1187,84.92 %

UNIVERSITY OF CALIFORNIA, SAN FRANCISCO,1348,85.31 %

ECLINICALWORKS, LLC,1547,85.46 %

UNIVERSITY OF CALIFORNIA, LOS ANGELES,1172,85.49 %

VIRTUSA CORPORATION,2217,85.61 %

EMC CORPORATION,4467,85.63 %

CVS RX SERVICES, INC.,2735,85.63 %

SAPIENT CORPORATION,2237,85.65 %

WAL-MART ASSOCIATES, INC.,3670,85.89 %

COMCAST CABLE COMMUNICATIONS, LLC,1214,86.16 %

CIBER, INC.,2097,86.27 %

COGNIZANT TECHNOLOGY SOLUTIONS U.S. CORPORATION,17528,86.73 %

UNIVERSITY OF ILLINOIS AT CHICAGO,1131,87.09 %

MICROSOFT CORPORATION,25576,87.32 %

MORGAN STANLEY & CO. LLC,1669,87.66 %

FACEBOOK, INC.,4145,87.74 %

AT&T SERVICES, INC.,1201,87.76 %

MARVELL SEMICONDUCTOR, INC.,1631,88.23 %

CAPITAL ONE SERVICES, LLC,2796,88.34 %

JPMORGAN CHASE & CO.,7035,88.34 %

MICROEXCEL, INC,1159,88.44 %

VERIZON DATA SERVICES LLC,1635,88.62 %

HP ENTERPRISE SERVICES, LLC,1149,88.69 %

INTEL CORPORATION,11415,88.76 %

SOFTWARE PARADIGMS INTERNATIONAL GROUP, LLC,1034,88.78 %

BROOKHAVEN NATIONAL LABORATORY,1023,88.86 %

BALTIMORE CITY PUBLIC SCHOOLS,1014,88.95 %

UST GLOBAL INC,6355,89.00 %

L&T TECHNOLOGY SERVICES LIMITED,3722,89.07 %

CMC AMERICAS, INC.,1157,89.28 %

INTUIT INC.,1404,89.32 %

THE PENNSYLVANIA STATE UNIVERSITY,1042,89.64 %

MOUNT SINAI MEDICAL CENTER,1114,89.86 %

MANAGEMENT HEALTH SYSTEMS, INC.,2000,89.90 %

ORION SYSTEMS INTEGRATORS, INC,1160,89.91 %

TECH MAHINDRA (AMERICAS), INC.,7019,89.96 %

ITECH US, INC.,2476,90.06 %

SYSTEM SOFT TECHNOLOGIES LLC,3102,90.07 %

AMAZON CORPORATE LLC,9026,90.21 %

HSBC BANK USA, N.A.,1110,90.27 %

BANK OF AMERICA N.A.,4282,90.33 %

WIPRO LIMITED,48117,90.35 %

ASTIR IT SOLUTIONS INC.,1955,90.69 %

RANDSTAD TECHNOLOGIES, LP,3419,90.79 %

CYBERTHINK INC,1618,90.91 %

TESLA MOTORS, INC.,1441,90.98 %

UBER TECHNOLOGIES, INC.,1006,91.05 %

GOLDMAN, SACHS & CO.,3713,91.14 %

SATYAM COMPUTER SERVICES LTD.,1694,91.26 %

ITC INFOTECH (USA), INC.,1859,91.34 %

HEWLETT-PACKARD COMPANY,1639,91.58 %

CISCO SYSTEMS, INC.,3140,91.69 %

CHILDREN'S HOSPITAL CORPORATION,1017,91.74 %

TECHNOSOFT CORPORATION,1625,91.82 %

INOVANT, LLC,1086,91.90 %

KPIT INFOSYSTEMS, INC.,3114,91.94 %

LARSEN & TOUBRO LIMITED,3066,92.01 %

MERRILL LYNCH,1873,92.15 %

PEOPLE TECH GROUP INC.,1124,92.26 %

A2Z DEVELOPMENT CENTER, INC.,1025,92.29 %

APPLE INC.,7317,92.32 %

SYNECHRON, INC.,3802,92.77 %

FUJITSU AMERICA, INC.,5309,92.79 %

ADOBE SYSTEMS INCORPORATED,1167,92.80 %

CAPGEMINI U.S. LLC,3712,92.86 %

NIIT TECHNOLOGIES LIMITED,1339,92.91 %

TWITTER, INC.,1328,92.92 %

EBAY INC.,3464,93.01 %

PAYPAL, INC.,2830,93.04 %

HEXAWARE TECHNOLOGIES, INC.,5466,93.65 %

AMERICAN EXPRESS TRAVEL RELATED SERVICES COMPANY, INC.,1045,93.68 %

SALESFORCE.COM, INC.,2245,94.25 %

MAYO CLINIC,1772,94.30 %

UST GLOBAL INC.,6363,94.39 %

POLARIS SOFTWARE LAB (INDIA) LTD.,1326,94.42 %

CYMA SYSTEMS INC,1269,94.48 %

MEMORIAL SLOAN-KETTERING CANCER CENTER,1080,94.54 %

VEDICSOFT SOLUTIONS LLC,1274,94.58 %

DALLAS INDEPENDENT SCHOOL DISTRICT,1729,94.62 %

SYNTEL CONSULTING INC.,3167,94.70 %

PYRAMID TECHNOLOGY SOLUTIONS, INC,1056,95.36 %

LARSEN & TOUBRO INFOTECH LIMITED,17457,95.39 %

CAPGEMINI AMERICA INC,16725,95.41 %

HEADSTRONG SERVICES LLC,2587,95.48 %

EXPERIS US, INC.,1641,95.49 %

DOTCOM TEAM, LLC,1125,95.73 %

UNIVERSITY OF MINNESOTA,1353,95.79 %

THE MATHWORKS, INC.,2020,95.79 %

TECHDEMOCRACY LLC,1027,95.81 %

SATYAM COMPUTER SERVICES LIMITED,2403,95.84 %

IGATE TECHNOLOGIES INC.,12564,95.91 %

PATNI AMERICAS INC.,3149,95.94 %

KPMG LLP,4629,96.03 %

ERP ANALYSTS, INC.,1785,96.13 %

COLLABORATE SOLUTIONS INC,1209,96.20 %

CAPGEMINI FINANCIAL SERVICES USA INC,4426,96.48 %

BLOOMBERG, LP,2352,96.64 %

BIRLASOFT INC,2370,96.67 %

PRICEWATERHOUSECOOPERS LLP,2719,96.69 %

SMARTSOFT INTERNATIONAL, INC.,1212,96.70 %

VMWARE, INC.,2617,96.71 %

LARSEN & TOUBRO TECHNOLOGY SERVICES LTD,1385,96.75 %

VEDICSOFT,1169,96.83 %

TECH MAHINDRA (AMERICAS) INC.,2102,96.86 %

SYNTEL INC,1946,97.02 %

CYIENT, INC.,1281,97.03 %

PHOTON INFOTECH, INC.,1235,97.09 %

CSC COVANSYS CORPORATION,2251,97.11 %

NATSOFT CORPORATION,1137,97.19 %

RITE AID CORP.,1577,97.21 %

PRICEWATERHOUSECOOPERS ADVISORY SERVICES LLC,1724,97.22 %

NVIDIA CORPORATION,1182,97.29 %

COMPUTER SCIENCES CORPORATION,1089,97.43 %

THE BOSTON CONSULTING GROUP, INC.,1352,97.56 %

INFOSYS TECHNOLOGIES LIMITED,1336,97.60 %

SATYAM COMPUTER SERVICES LTD,1622,97.66 %

PERFICIENT, INC.,1366,97.73 %

GENPACT LLC,1046,97.80 %

AKVARR INC,1372,97.89 %

DELOITTE & TOUCHE LLP,9642,97.93 %

3I INFOTECH, INC.,2041,97.94 %

PRICEWATERHOUSECOOPERS, LLP,2529,97.94 %

ERNST & YOUNG U.S. LLP,18232,98.04 %

HCL AMERICA, INC.,22678,98.04 %

MCKINSEY & COMPANY, INC. UNITED STATES,1097,98.09 %

COMPUNNEL SOFTWARE GROUP, INC.,3378,98.19 %

AVCO CONSULTING INC,1424,98.24 %

CGI TECHNOLOGIES AND SOLUTIONS INC.,1995,98.25 %

DELOITTE CONSULTING LLP,36742,98.31 %

ACCENTURE LLP,33447,98.40 %

NTT DATA, INC.,4611,98.53 %

SAP AMERICA, INC.,1456,98.56 %

KFORCE INC.,1596,98.56 %

DELOITTE TAX LLP,2501,98.56 %

MPHASIS CORPORATION,5199,98.58 %

AMDOCS INC.,1023,98.63 %

RELIABLE SOFTWARE RESOURCES, INC.,1992,98.80 %

GRANDISON MANAGEMENT, INC.,1386,98.99 %

TECH MAHINDRA ( AMERICAS), INC,1170,99.06 %

MINDTREE LIMITED,4067,99.07 %

TATA CONSULTANCY SERVICES LIMITED,64726,99.24 %

YASH & LUJAN CONSULTING, INC.,1372,99.27 %

YASH TECHNOLOGIES, INC.,2214,99.28 %

TECH MAHINDRA (AMERICAS),INC.,10732,99.34 %

INFOSYS LIMITED,130592,99.48 %

DIASPARK, INC.,1419,99.51 %

HTC GLOBAL SERVICES, INC.,1164,100.00 %

10. Which are the job positions along with the number of petitions which have the success rate more than 70% in petitions (total petitions filed 1000 OR more than 1000)?

**Output:**

POSTDOCTORAL RESEARCHER,2130,71.50 %

STAFF SCIENTIST,1242,72.14 %

RESEARCHER,1031,73.04 %

PROGRAMMER ANALYSTS,1133,73.08 %

ASSISTANT RESEARCH SCIENTIST,1103,73.35 %

POSTDOCTORAL RESEARCH ASSOCIATE,6041,73.40 %

SOFTWARE DESIGN ENGINEER,1080,74.17 %

POSTDOCTORAL FELLOW,7857,74.43 %

GENERAL MANAGER,1348,75.07 %

RESEARCH FELLOW,5981,75.09 %

POSTDOCTORAL ASSOCIATE,5145,75.80 %

RESEARCH ASSISTANT PROFESSOR,1973,75.87 %

CHIEF EXECUTIVE OFFICER,1095,76.62 %

INSTRUCTOR,3014,77.07 %

MARKETING MANAGER,2230,77.09 %

ASSOCIATE RESEARCH SCIENTIST,1400,77.14 %

RESEARCH ASSOCIATE,13623,77.57 %

ATTORNEY,1050,77.71 %

ASSOCIATE PROFESSOR,1441,77.79 %

POST DOCTORAL FELLOW,1507,77.90 %

SENIOR HARDWARE ENGINEER,1653,77.92 %

LAW CLERK,1709,78.12 %

POSTDOCTORAL RESEARCH FELLOW,2346,78.13 %

ASSOCIATE ATTORNEY,1533,78.15 %

VALIDATION ENGINEER,1159,79.12 %

PROGRAMMER/ANALYST,9375,79.27 %

PUBLIC RELATIONS SPECIALIST,1931,79.60 %

FINANCIAL MANAGER,1080,79.81 %

OPERATIONS MANAGER,1785,79.94 %

ASSISTANT PROFESSOR,25265,80.05 %

GRAPHIC DESIGNER,5020,80.10 %

RESEARCH SCIENTIST,5154,80.23 %

SALES MANAGER,1232,80.36 %

CLINICAL ASSISTANT PROFESSOR,1281,80.72 %

ASSISTANT VICE PRESIDENT,2132,80.72 %

BUSINESS OPERATIONS SPECIALIST,1034,80.75 %

ACCOUNTANT,14048,80.77 %

SCIENCE TEACHER,1127,81.10 %

SYSTEM ANALYST JC65,1419,81.18 %

MARKET RESEARCH ANALYST,8934,81.18 %

POSTDOCTORAL SCHOLAR,3186,81.36 %

HARDWARE ENGINEER,2556,81.38 %

SENIOR SYSTEM ENGINEER,1408,81.39 %

VISITING ASSISTANT PROFESSOR,1311,81.54 %

ELECTRICAL ENGINEER,4174,81.72 %

RESEARCH ASSISTANT,1777,81.94 %

SENIOR RESEARCH ASSOCIATE,1015,81.97 %

IT SPECIALIST,2585,81.97 %

MANAGING CONSULTANT,3873,82.08 %

LECTURER,2257,82.10 %

RESEARCH ANALYST,1869,82.24 %

FINANCIAL ANALYST,8515,82.27 %

TEACHER,3576,82.33 %

RESIDENT,1245,82.33 %

CIVIL ENGINEER,2257,82.37 %

VICE PRESIDENT,3159,82.37 %

DIRECTOR,1333,82.45 %

SCIENTIST,1340,82.46 %

CLINICAL FELLOW,1146,82.64 %

MARKETING ANALYST,1573,82.84 %

INTERIOR DESIGNER,1361,82.88 %

DENTIST,3250,82.92 %

BUSINESS DEVELOPMENT ANALYST,1148,82.93 %

PROGRAMMER ANALYST II,1059,83.00 %

SENIOR FINANCIAL ANALYST,1196,83.19 %

BUSINESS DEVELOPMENT MANAGER,2345,83.20 %

ACCOUNT MANAGER,1066,83.21 %

MARKETING SPECIALIST,2150,83.21 %

QUANTITATIVE ANALYST,1293,83.22 %

APPLICATIONS ENGINEER,1688,83.23 %

TECHNICAL PROJECT MANAGER,1052,83.37 %

STAFF ACCOUNTANT,4491,83.46 %

SOFTWARE DEVELOPMENT ENGINEER IN TEST,4258,83.51 %

APPLICATION PROGRAMMER,1686,83.63 %

INDUSTRIAL ENGINEER,2093,83.66 %

MANAGEMENT ANALYST,5386,83.94 %

BUSINESS DEVELOPMENT SPECIALIST,1482,83.94 %

ENGINEERING MANAGER,1199,83.99 %

PROGRAMMER/ ANALYST,1000,84.00 %

COMPUTER SOFTWARE ENGINEER,2684,84.13 %

DESIGNER,1992,84.24 %

TEST SPECIALIST,1011,84.27 %

NEPHROLOGIST,1027,84.32 %

ELECTRONICS ENGINEER,1060,84.34 %

MANUFACTURING ENGINEER,1906,84.37 %

SOFTWARE QA ANALYST,1112,84.44 %

DATABASE ANALYST,1050,84.67 %

PRODUCT MANAGER,3367,84.67 %

SENIOR PRODUCT MANAGER,1085,84.70 %

BUDGET ANALYST,1687,84.83 %

COMPUTER SYSTEM ANALYST,3753,84.84 %

SOFTWARE ENGINEER II,2051,84.89 %

SOFTWARE ENGINEER,121307,84.90 %

STRUCTURAL ENGINEER,1094,84.92 %

STAFF SOFTWARE ENGINEER,2976,84.98 %

ENGINEER II,1249,85.03 %

SOFTWARE DEVELOPMENT ENGINEER,7284,85.06 %

SALES ENGINEER,2167,85.09 %

MECHANICAL ENGINEER,7301,85.10 %

SENIOR ENGINEER,3773,85.10 %

PEDIATRICIAN,1214,85.26 %

CHEMIST,1380,85.29 %

SENIOR SYSTEMS ENGINEER,2030,85.32 %

QUALITY ASSURANCE ENGINEER,3647,85.39 %

ELEMENTARY SCHOOL TEACHER,1304,85.51 %

PROCESS ENGINEER,4377,85.54 %

SYSTEM ENGINEER,2145,85.55 %

PRINCIPAL ENGINEER,1066,85.55 %

RESIDENT PHYSICIAN,2119,85.56 %

APPLICATION DEVELOPER,7692,85.57 %

QUALITY ANALYST,2616,85.59 %

OCCUPATIONAL THERAPIST,4437,85.60 %

NETWORK ENGINEER,5422,85.65 %

PROGRAMMER / ANALYST,1173,85.68 %

OPERATIONS RESEARCH ANALYST,1946,85.71 %

PRODUCT ENGINEER,2634,85.73 %

COMPUTER PROGRAMMER/ANALYST,1122,85.74 %

ASSOCIATE SOFTWARE ENGINEER,1215,85.76 %

ANALYST,11751,85.98 %

SENIOR DESIGN ENGINEER,1209,86.02 %

RESEARCH ENGINEER,1338,86.02 %

PROGRAM MANAGER,3920,86.12 %

SOFTWARE QA ENGINEER,1169,86.14 %

TECHNICAL SUPPORT ENGINEER,1230,86.18 %

LEAD SOFTWARE ENGINEER,1572,86.32 %

ORACLE DATABASE ADMINISTRATOR,1527,86.38 %

TEST CONSULTANT,1454,86.38 %

SENIOR ANALYST,1646,86.39 %

CONSULTANT LEVEL 3,1171,86.42 %

SOFTWARE DEVELOPMENT ENGINEER I,2128,86.47 %

MEDICAL TECHNOLOGIST,3125,86.56 %

ASSOCIATE,12502,86.63 %

SENIOR SOFTWARE DEVELOPMENT ENGINEER,1399,86.63 %

SENIOR JAVA DEVELOPER,1395,86.67 %

PROJECT ENGINEER,6439,86.69 %

SENIOR SOFTWARE ENGINEER,27133,86.78 %

PHYSICAL THERAPIST,20207,86.85 %

SOFTWARE PROGRAMMER,3577,86.89 %

SENIOR PROJECT MANAGER,1015,86.90 %

SOFTWARE ENGINEER III,1328,87.05 %

DESIGN ENGINEER,6325,87.10 %

QUALITY ENGINEER,2381,87.27 %

SENIOR DATABASE ADMINISTRATOR,1229,87.31 %

ENGINEER,4941,87.31 %

PRINCIPAL SOFTWARE ENGINEER,2257,87.33 %

JAVA DEVELOPER,7596,87.36 %

SENIOR APPLICATION DEVELOPER,1965,87.38 %

SYSTEMS ANALYST JC65,3321,87.38 %

SOFTWARE DEVELOPER, APPLICATIONS,1830,87.43 %

PHARMACIST,5864,87.43 %

MEDICAL RESIDENT,2336,87.46 %

ARCHITECTURAL DESIGNER,2334,87.53 %

HOSPITALIST,4387,87.55 %

SR. SOFTWARE ENGINEER,4863,87.64 %

SR. SOFTWARE DEVELOPER,1161,87.77 %

HOSPITALIST PHYSICIAN,4067,87.78 %

ASSOCIATE CONSULTANT,1350,87.85 %

.NET DEVELOPER,2921,87.88 %

PROGRAMMER ANALYST LEVEL 1,2395,87.89 %

SOLUTION ARCHITECT,1994,87.91 %

ETL DEVELOPER,1841,87.94 %

SOFTWARE DEVELOPER,42907,88.03 %

PSYCHIATRIST,1289,88.05 %

NETWORK ADMINISTRATOR,2624,88.07 %

SENIOR SOFTWARE DEVELOPER,10208,88.14 %

SENIOR DEVELOPER,2994,88.18 %

PHYSICIAN,4417,88.25 %

PROJECT MANAGER,20172,88.31 %

BUSINESS SYSTEMS ANALYST,10110,88.33 %

SOFTWARE ARCHITECT,1878,88.39 %

TECHNICAL RECRUITER,1364,88.42 %

MANAGER JC50,1874,88.42 %

COMPUTER PROGRAMMER ANALYST,13634,88.43 %

SAP CONSULTANT,3023,88.46 %

SPECIAL EDUCATION TEACHER,1721,88.55 %

SYSTEM ANALYST,4684,88.56 %

QA ENGINEER,2224,88.58 %

TEST ENGINEER LEVEL 1,1036,88.61 %

DATA SCIENTIST,1932,88.61 %

COMPUTER PROGRAMMERS,4963,88.62 %

SENIOR BUSINESS ANALYST,3402,88.68 %

BUSINESS ANALYST,39681,88.72 %

DATA ANALYST,3805,88.75 %

STAFF ENGINEER,1869,88.76 %

SPEECH LANGUAGE PATHOLOGIST,1381,88.78 %

SOFTWARE QUALITY ASSURANCE ENGINEER,4920,88.88 %

APPLICATION ENGINEER,1458,88.89 %

DATABASE ADMINISTRATOR,16665,89.16 %

SOFTWARE DEVELOPMENT ENGINEER II,3274,89.16 %

PROGRAMMER,6011,89.20 %

SOFTWARE DEVELOPERS, APPLICATIONS,1195,89.21 %

QUALITY ASSURANCE ANALYST,7326,89.23 %

SR. PROGRAMMER ANALYST,3716,89.29 %

QA ANALYST,6871,89.32 %

SYSTEM ADMINISTRATOR,5048,89.42 %

PROGRAMMER ANALYST,249038,89.44 %

SYSTEMS ADMINISTRATOR,6659,89.47 %

ARCHITECT LEVEL 2,2892,89.49 %

DATABASE DEVELOPER,1155,89.52 %

SYSTEMS ENGINEER,8078,89.56 %

COMPUTER SYSTEMS ANALYST,35086,89.59 %

SOLUTIONS ARCHITECT,1915,89.61 %

NETWORK AND COMPUTER SYSTEMS ADMINISTRATOR,1928,89.63 %

TEST LEAD,1726,89.69 %

INDUSTRIAL DESIGNER,3619,89.83 %

TEST ENGINEER,3936,89.84 %

COMPUTER SPECIALIST,2175,89.84 %

BUSINESS INTELLIGENCE ANALYST,1972,89.86 %

SENIOR SYSTEMS ANALYST JC60,3069,89.90 %

SYSTEMS ANALYST,61965,89.96 %

IT CONSULTANT,3497,89.96 %

COMPONENT DESIGN ENGINEER,2851,90.28 %

TECHNICAL LEAD,5218,90.34 %

SR. SYSTEMS ANALYST,1151,90.36 %

IT PROJECT MANAGER,2473,90.46 %

SENIOR PROGRAMMER ANALYST,5810,90.60 %

COMPUTER SYSTEMS ANALYSTS,4728,90.71 %

COMPUTER PROGRAMMER,70570,90.72 %

MEMBER OF TECHNICAL STAFF,1774,90.76 %

TEST ENGINEER LEVEL 2,2372,90.77 %

RF ENGINEER,2794,90.94 %

BUSINESS SYSTEM ANALYST,4435,91.09 %

TECHNICAL MANAGER,1060,91.13 %

SOFTWARE TEST ENGINEER,3591,91.17 %

APPLICATIONS DEVELOPER,3366,91.21 %

LEAD ENGINEER,11157,91.37 %

TEST ANALYST,1419,91.40 %

TECHNICAL CONSULTANT,3420,91.73 %

QA TESTER,1170,91.79 %

ELEMENTARY BILINGUAL TEACHER,2088,91.91 %

PRINCIPAL CONSULTANT,1836,92.05 %

SENIOR MANAGER,1439,92.08 %

SENIOR SYSTEMS ANALYST,5353,92.10 %

WEB DEVELOPER,8024,92.16 %

SENIOR ASSOCIATE,3540,92.32 %

SENIOR CONSULTANT,24904,92.33 %

SOFTWARE ANALYST,1072,92.54 %

LEAD DEVELOPER,1049,92.56 %

TECHNICAL SPECIALIST,1295,92.59 %

SOFTWARE ENGINEER 3,1891,92.81 %

CONSULTANT,23081,92.97 %

TECHNICAL ANALYST,2932,93.01 %

TECHNICAL ARCHITECT,2908,93.12 %

ARCHITECT,4982,93.54 %

COMPUTER SOFTWARE ENGINEER, APPLICATIONS,4426,93.63 %

APPLICATIONS CONSULTANT,1180,93.64 %

SENIOR TECHNICAL CONSULTANT,1882,93.78 %

PROJECT LEAD,2363,93.91 %

SOFTWARE ENGINEER & TESTER,1538,94.02 %

MANAGER,8561,94.04 %

PHYSICIAN IN A POST GRADUATE TRAINING PROGRAM,2421,94.42 %

SYSTEMS ANALYSTS,1252,94.89 %

COMPUTER SYSTEMS ENGINEER,11090,94.95 %

LEAD CONSULTANT,2169,94.97 %

SOFTWARE ENGINEER 2,4166,95.08 %

DEVELOPER,12909,95.67 %

PROGRAMMER/DEVELOPER,1560,95.83 %

FUNCTIONAL CONSULTANT,1115,95.87 %

ASSURANCE SENIOR,1607,95.96 %

ERS CONSULTANT,2170,97.05 %

SOFTWARE ENGINEER AND TESTER,1216,97.29 %

ADVISORY SENIOR ASSOCIATE,1332,97.45 %

SOFTWARE QUALITY ASSURANCE ENGINEER AND TESTER,1568,97.45 %

COMPUTER SYSTEMS ENGINEER/ARCHITECT,2067,97.82 %

TAX SENIOR,1838,97.82 %

AUDIT SENIOR,1070,97.85 %

BUSINESS TECHNOLOGY ANALYST,2005,97.86 %

ERS SENIOR CONSULTANT,2249,97.91 %

ADVISORY STAFF,2413,98.01 %

AUDIT ASSISTANT,1205,98.09 %

MODULE LEAD,2226,98.20 %

SPECIALIST SENIOR,1447,98.20 %

ADVISORY MANAGER,3255,98.22 %

COMPUTER SPECIALIST/SYSTEM SUPPORT AND DEVELOPMENT ADMIN 2,1085,98.34 %

COMPUTER PROGRAMMER/CONFIGURER 3,1145,98.43 %

COMPUTER PROGRAMMER / CONFIGURER 2,1276,98.51 %

PROGRAMMER ANALYST - I,1432,98.60 %

ADVISORY SENIOR,5416,98.65 %

COMPUTER SYSTEMS ANALYST 3,2170,98.71 %

DATA WAREHOUSE SPECIALIST,1631,98.71 %

COMPUTER SPECIALIST/TESTING AND QUALITY ANALYST 2,3998,98.72 %

COMPUTER SPECIALIST/SYSTEM SUPPORT AND DEVELOPMENT,1339,98.81 %

COMPUTER SYSTEMS ANALYST 2,4031,98.81 %

SYSTEMS ANALYST - III,1006,98.91 %

COMPUTER PROGRAMMER/CONFIGURER 2,6729,98.92 %

ASSURANCE STAFF,2334,99.01 %

PROJECT MANAGER - III,1651,99.09 %

SYSTEMS ANALYST - II,1339,99.10 %

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