



12/06/2018

Re: Ashish Veera ("Beneficiary")

To Whom It May Concern:

This letter confirms that Tata Consultancy Services Limited ("TCSL") has an agreement with United Services Automobile Association ("USAA") wherein TCSL provides information technology services to USAA. These services include those of ASHISH VEERA, a TCSL employee who will work onsite at a USAA facility as a Data Warehouse Specialist (Data Warehousing Specialist).

TCSL has an ongoing relationship with USAA pursuant to the Master Services Agreement executed on July 01, 2015. Pursuant to that Agreement, TCSL has been engaged for the Decision Science Design Analytics project for which the professional services of ASHISH VEERA are required as a Data Warehouse Specialist. It is anticipated that the services of ASHISH VEERA will be required through at least May 2020.

As a Data Warehouse Specialist, ASHISH VEERA will be working on the following TCSL project:

USAA is a worldwide insurance and diversified financial services family of company's head quartered in San Antonio, Texas. USAA currently serves more than 11.4 million members of the U.S. military and their families. USAA has provided Insurance and financial services to the US military community and their families since 1922. A member owned Fortune 500 Company, USAA owns and manages more than \$137 billion in assets.

One of the current TCSL assignment is to enable USAA to provide security to its customer's financial transactions in all possible ways. TCSL, with its extensive experience of the financial services industry, brings in a pool of accredited and Industry Experience rich associates with deep domain understanding and Initiative approaches. TCSL has extensive experience in developing enterprise applications for fraud detection and prevention in the financial services industry. More than half a decade TCSL has been servicing USAA in financial service industry which makes TCSL a unique service provider to USAA. TCSL fraud practice has harnessed this experience and expertise in developing solutions in fraud prevention and detection. TCSL with the strong domain and technical expertise provides solutions to the customers that helps in achieving their business directives.

The Decision Science Design Analytics project, which is under the umbrella of Enterprise Security Group, aids in preventing fraudulent transactions and detecting any financial fraud happening at USAA by sourcing, extracting, loading, transforming, understanding and analyzing different types of data coming from various sources and entities. The primary focus of the project is to design, develop, maintain and enhance the data warehouse systems and building new data marts for Decision Science Design Analytics, thereby enabling the Decision Science analysts to leverage the data available from the data warehouses and the corresponding data marts, in order to make informed decisions and thereby efficiently prevent, detect and report the fraudulent transactions. USAA gets most of the data including customer demographic information, customer communication preferences data, Insurance claims data, past financial records, web and mobile

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authentication log data, web and mobile session data, financial products owned by the customer (such as Insurance, Banking, Investments, IRA's & Health Insurance), customer transactional data (such as remote deposits, credit card transactions, debit card transactions, wire transfers, direct deposits) and other information from various entities which are stored in different operational databases (such as DB2, Oracle). This data is extracted, transformed and stored in data warehouse and databases from which data marts are created, and then combined with the past fraudulent transactional data to study, analyze and design rules by using automated programming and there by prevent and detect any future fraudulent transactions. The data is also moved from operational data warehouse to reporting databases mapped to data marts from which it is extracted, validated and analyzed to generate reports, dashboards, make data decision models, which helps USAA to prevent and detect fraud from all aspects. This project also reports daily updates on data related to real time suspicious callers and high dollar amount transfers, by collecting information from a myriad of sources stored in different data sources like DB2, Oracle, and other files. This project also helps in migrating the reports from legacy system to best in technology, thereby assisting the decision science analysts to better monitor and prevent the fraud activities. The process includes cleansing and cross referencing structured or unstructured data, synchronization between source and target databases/ data, integration, loading of the data, generation of reports and alert notification.

The project's goal also includes end-to-end development, from requirements gathering, analysis, design, development, testing, maintenance & support and production deployment of data warehouse, data marts and reports of varying complexity.

Benefits to the client from the successful completion of the project:

- Provides USAA Decision Science analysts, the ability to identify the trend in fraudulent activities at much efficient rate.
- Aid in USAA's brand and member's protection (against an evolving fraud or any Account take over) by automating, integrating and visualizing alerting capabilities.
- Improved usability/intuitiveness/expanded capabilities.
- Delivering best in class service for members who are victims of fraud.

USAA is using multiple tools in Decision Science Design Analytics team, such as SQL Server, Oracle 12g, Netezza, Hadoop, Apache Hive, SAS Enterprise Guide, IBM SPSS Statistics, IBM InfoSphere DataStage, Python and Tableau to analyze, extract, transform, load, retrieve data from various disparate sources & filesystems and report accordingly. TCSL has been approached to identify and streamline data processes and help in gathering and analyzing correct data for data analysis, business reporting, designing fraud decision rules and generating insights, so as to prevent financial frauds.

TCSL associates as a Data Warehouse Specialist are to extract, transform and load the relevant data from various operational sources and verify the structure, correctness or quality of the extracted data. They are also responsible for mapping data from various data warehouses, databases and to data marts by making complex SQL queries, writing programs, generating real

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time reports and provide end-to-end support for Decision Science Analytics team, in order to mitigate fraudulent activities.

Ashish Veera has wide knowledge and experience working on different types of databases like Oracle 12g, DB2, Netezza, and SQL Server along with data analysis methodologies. He has expertise in providing end-to-end solutions (data extraction, loading, transformation, model building, writing programs, analysis and maintenance) and specific design/development services across different environments.

Pursuant to this project, ASHISH VEERA will perform the following duties:

Job Duty Description	Technology and/or Software used for Duty	% Of Time Spent on Duty	Hours Per Week spent on duty	Minimum Education Required for duty
<u>During Planning Phase:</u> <ul style="list-style-type: none">• Meeting with USAA business team to identify the requirements.• Document the usage expectations of USAA Decision Science analysts, in terms of leveraging the data from the data warehouse and the corresponding data marts.• Identify and document the measures, aggregations and frequency of updates required to the data ware house and data mart.• Engage in real time day-to-day interactions with the USAA business users and the Decision Science analysts using agile methodology.• Prioritize the tasks based on nature of work and help Scrum master to estimate the complexity of user stories.	IBM Rational Team concert (RTC)	10%	4	Bachelor's degree or its equivalent in Computer Science, Engineering, Information Systems, or a directly related field
<u>During Analysis Phase:</u> <ul style="list-style-type: none">• Identify source data bases and perform data analysis on the source databases data and prepare an initial analysis report of transactions, customers, and claims to	DB2, Oracle 12g, Netezza, SQL Server,	10%	4	Bachelor's degree or its equivalent in Computer Science, Engineering,

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<p>provide insights to USAA decision science analysts.</p> <ul style="list-style-type: none"> • Develop a conceptual model for the data warehouse, by creating Entity Relationship diagrams, which can be used by the USAA Business users and Decision Science Analysts to connect business concepts to data warehouse database structures. • Analyze the existing process, system and data and present the results of the analysis to the USAA Business team and Enterprise Architects in order to refine and logically structure the existing requirements. • Analyze extract tools used to derive Tables/Views of data, determine the relationships between data objects and understand the architecture, type and state of data on current data warehouse system. • Analyze historical data to identify trends, patterns or correlation between the data variables that are required to be included in the data mart. 	<p>Hadoop, Apache Hive, SAS Enterprise Guide, IBM SPSS Statistics, Mainframes, Microsoft Visio</p>			<p>Information Systems, or a directly related field</p>
<p><u>During Design Phase:</u></p> <ul style="list-style-type: none"> • Define the structure of the Data Warehouse by deriving the logical data models for the data warehouse from the conceptual data model. • Document the source to target data mapping at a conceptual level, between USAA's transactional source systems, data warehouses and the corresponding data marts related to USAA Decision Science Design Analytics team. • Participate in architecture design to drive system design to meet architecture guidance. • Present the design documents to the USAA Business team and get the sign-off on the proposed design. 	<p>Microsoft Visio, CA Erwin Data Modeler</p>	<p>20%</p>	<p>8</p>	<p>Bachelor's degree or its equivalent in Computer Science, Engineering, Information Systems, or a directly related field</p>



<p><u>During Development Phase:</u></p> <ul style="list-style-type: none"> Build the Physical Data warehouse data base structures & corresponding data marts and populate the data ware house by extracting and loading the data destined for the Data Warehouse from the source database systems. The specific tasks involved in here are: <ul style="list-style-type: none"> i) Work with source system analysts to understand the windows available for data extraction. ii) Program, test, implement and maintain any data extraction programs/ codes necessary to extract the data from the source database systems, which need to be ingested into the Data warehouse. Applying transformation rules as necessary to keep the data clean and consistent. The specific tasks include: <ul style="list-style-type: none"> i) Programming the data acquisition tool with the rules to be applied to the data, in accordance with the business requirements. ii) Ensuring the correct application of the business rules through data query after the data is loaded into the Data warehouse. Develop transformation code from existing application data to new application and perform balancing. Create data marts that store data specifically indented to be used by the Decision Science Design team. Modify existing programs to enhance performance and thereby tune the data warehouse and the corresponding data marts for optimized data access. Build and schedule data pipeline jobs for batch loading the data warehouse systems and data marts, in accordance with the business requirements. 	<p>IBM InfoSphere DataStage, Apache Hive, SAS Enterprise guide, Python, Netezza, DB2, Oracle12g, Microsoft SQL Server, BMC Control-M</p>	<p>25%</p>	<p>10</p>	<p>Bachelor's degree or its equivalent in Computer Science, Engineering, Information Systems, or a directly related field</p>
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<ul style="list-style-type: none"> Develop new programs or modify existing programs to generate business rules/decisions that flag fraudulent transactions, create alerts and automate the process that will pin-point areas of the business that require immediate attention. 				
<u>During Testing Phase:</u> <ul style="list-style-type: none"> Create a test schedule by estimating the amount of time required to test the data warehouse system and the corresponding data marts. Document test plans by incorporating test cases or scenarios for performing both Unit testing and Integration testing. Perform unit and integration testing for the data warehouse & data marts to validate the structure, correctness or quality of the data warehouse data. Develop data reconciliation programs to compare the target data contained in the data warehouse system and the data marts, with the original source data in order to validate the structure, quality and data accuracy and ensure that new data warehouse systems work as expected. Develop SQL queries to validate the key constraints to ensure that they are applied on the correct keys in the appropriate tables and also perform data transform validation, data correctness validation, null validation, and duplicate validation. Evaluate the performance of the data warehouse systems and the data marts to ensure that the data access is at optimal level. 	Netezza, Oracle 12g, DB2, Microsoft SQL Server, Apache Hive, SAS Enterprise Guide	10%	4	Bachelor's degree or its equivalent in Computer Science, Engineering, Information Systems, or a directly related field
<u>Provide Maintenance and Support:</u> <ul style="list-style-type: none"> Troubleshoot data quality issues within the source systems, data warehouses and the data marts and deploy appropriate 	BMC Control-M, SAS Enterprise Guide,	10%	4	Bachelor's degree or its equivalent in Computer Science, Engineering,

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<p>fixes to maintain quality and performance.</p> <ul style="list-style-type: none"> • Pairing weekly with Enterprise architects /Business Users and verify that the data in database or data marts are loaded accurately and as expected and address any ad hoc issues. • Monitor the jobs/programs and perform backup and recovery if required. • Document procedures for trouble shooting known issues and support the final users of the data warehouse and data marts. 	Apache Hive			Information Systems, or a directly related field
<p><u>Review and Reporting:</u></p> <ul style="list-style-type: none"> • Perform code reviews, design reviews and test case reviews to ensure that the best practices are incorporated during the entire lifecycle of Data warehouse and data mart development in order to ensure quality of the end product. • Identify opportunities for further improvements that needs to be incorporated in the future enhancements of the Data warehouse and data mart development. • Review traceability matrices and verify that all the requirements have been tested. • Generate reports that aid in monitoring the volume and accuracy of fraudulent alerts that are generated by the Decision Science Design Analytics team. 	GitLab, Tableau, SQL, Python, Microsoft Visio	10%	4	Bachelor's degree or its equivalent in Computer Science, Engineering, Information Systems, or a directly related field
<p><u>Coordination and Team Collaboration:</u></p> <ul style="list-style-type: none"> • Report the progress with USAA and TCS Management and update the tasks in IBM RTC. • Provide status to Scrum meetings (Daily) and Provide valuable inputs to retrospectives(bi-weekly) 	IBM Rational Team Concert	5%	2	Bachelor's degree or its equivalent in Computer Science, Engineering, Information Systems, or a directly related field

In performing these duties, Ashish Veera will utilize the following technologies:

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Category	Details
Database	<ul style="list-style-type: none">• DB2• Microsoft SQL Server 2008• Oracle 12g• Netezza• Unix Database (UDB)
Programming Languages	<ul style="list-style-type: none">• SQL• PL/SQL• Python• Java• Unix shell scripting• Apache Hive
ETL Tool	<ul style="list-style-type: none">• IBM InfoSphere DataStage
Other Tools/ Software:	<ul style="list-style-type: none">• SAS Enterprise Guide• Hadoop• IBM Rational Team Concert• Microsoft Visual Studio• SQL Squirrel• Beyond Compare• CA Erwin Data Modeler• Jupyter notebook• Eclipse IDE• IBM SPSS Statistics• GitLab• Tableau
Scheduling Tool	<ul style="list-style-type: none">• BMC Control-M
Operating Systems	<ul style="list-style-type: none">• Windows7 Enterprise• UNIX• LINUX

TCSL requires all of its IT professionals to have a minimum of a bachelor's degree in Computer Science, Information Systems, Engineering, or a directly related field. ASHISH VEERA'S Bachelor's Degree in Computer Science & Engineering is a requirement for the role of Data Warehouse Specialist to ensure that ASHISH VEERA is qualified in a client-facing capacity and prepared to carry out the duties required to successfully execute this TCSL project. Without the knowledge gained through his education, ASHISH VEERA would be unable to execute the specialty occupation work TCSL is performing.



ASHISH VEERA'S employment with TCSL is not contingent on any particular project. TCSL has employed ASHISH VEERA in both India and the United States since August 22, 2011. TCSL will be fully responsible for directing, supervising and controlling ASHISH VEERA'S employment activities. TCSL will retain exclusive control over the hiring, firing, and assessment of ASHISH VEERA'S job performance. Furthermore, TCSL will continue to pay ASHISH VEERA and provide all employee benefits.

Should you have any questions about ASHISH VEERA'S employment or the nature of TCSL's business relationship with USAA, please do not hesitate to contact me.

Sincerely,

Manchambhatla Srinivasa Rao
Business Relationship Manager
(210) 215-6968
manchambhatla.srao@tcs.com

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