William Senfuma – Résumé

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Personal Profile

I am a God fearing, enthusiastic and self-motivated team player with at most attention to detail, accuracy and commitment to high quality. My career objective is to meet new challenges and knowledge with a positive attitude in order to achieve the expected organizational productivity and efficiency.

Education

2010-2012   Master of Science (Computer Science)
(Machine Learning, Computer Vision, Image Processing and Pattern Recognition) Makerere University, Uganda

CGPA: 4.45/5
Dissertation Title 'Meta Learning for Selection of Best Causal Discovery Algorithms'

2005-2008   Bachelor of Science (Computer Science, Mathematics) Makerere University, Uganda

First Class Honours CGPA: 4.55/5

1999-2004   Advanced Secondary Education - St. Peter's, Uganda

(Physics, Chemistry, Mathematics)

Certificates

2015-2016   Machine Learning | Stanford Online
Stanford University, Coursera

2015-2016   Big Data Hadoop Foundations | IBM
BigData University, IBM

2008-2009   Software Engineering

National Software Incubation Center (NSIC), Uganda

2012   Project Monitoring and Evaluation

Makerere University College of Humanities and Social Sciences, Uganda

Work Experience

Sep 2013 -   Tecnotree Corporation, Espoo, Finland
Present   *Consultant SEA Region (Telecom Billing)*

Scope of Service
Roaming and Interconnect

- Completely responsible (end to end) for activities undertaken as part of the Support team

- Carrying out TADIG (IREG) testing for new operators configured

- Issuing TAP certification on completion (TCC) of the testing phase with the operators

- Co-coordinating with the DCH (Data Clearing House) for the Transfer of TAPIN, TAPOUT files and RAP dispute

- Ensuring Files are transferred to DCH on time and daily checking of TAPIN Missing and Ageing files

- Trouble shooting of TAPIN and Switch files rating errors occurred during the rating process

- Reconciliation of TAPIN and TAPOUT files

- Troubleshooting the issues and recycling the Rejects and wrong rated CDR's for Roaming and Interconnect Partners

- Configuration of Roaming and Interconnect Partners

    Loyalty and Campaign Management

- Configure and launch Campaigns

- Monitor Campaigns, Pre-rating process, Rating

- Ensure reports are extracted and published in a timely manner

- Monitor rejections and clear them

- Support for patch movement

- Monitor and ensure redemptions are done without any delays

    General MSO Activities

- Work on aggressive time lines

- Handle Emergency/Critical Situations and Escalations

- Ensure that On site Support is done in a timely and efficient manner

- Adhere to Quality Life Cycle

Mar 2013 -
Sep 2013 Uganda Telecom, Kampala, Uganda
Business Analyst and Retention Manager

- Play key role in developing UTL retention strategy

- Reduce monthly churn rate, enhance customer life cycle value

- Implement Micro-Segmentation for UTL customers for identification of revenue streams and maintain and increase customer life cycle value

- Identify and monitor Telecom industry trends (New Sales, Churn, Reactivations, Market Share) and provide comprehensive business intelligence for new products

- Manage development and delivery of KPI aligned reports, dashboards and ad-hoc analysis for commercial team

- Formulate channel strategies, and along with designing performance scorecards (based on proven models)

- Develop forecasting models for Churn, Sales and Revenue projections

- Develop customer relationship strategies; test new concepts ("Above the Lin Line")

- Segment/Profile customers for loyalty, retention, upsell, cross sell and revenue enhancement

- Manage Micro Segmentation campaigns, pre and post and Return on Investment Analysis

- Design and develop 'information models' which are user-centered interfaces allowing rapid access to contextual information

- Integrate information points (data analytics, market research and market intelligence) to produce insights on customer and market behaviour

Sep 2012 -   Uganda Telecom, Kampala, Uganda
Feb 2013   *Business Intelligence Developer*

- Designing, planning and implementing BI solutions

- Debugging, monitoring and troubleshooting BI solutions

- Creating and deploying business reports using Microsoft Business Intelligence Suite (SSRS)

- Writing relational and multidimensional database queries for different Database Management Systems (MSSQL, MySQL(Infobright) and Oracle)

- Perform analysis and integration services using Microsoft Business Intelligence Suite (SSAS and SSIS)

- Market Basket Analysis (Association mining) –to identify common item sets and rules for cross-selling

- Classification and Regression

- Clustering for market micro-segmentation

- Forecasting

- Sequence and Deviation Analysis

Jan 2011 -   Uganda Telecom, Kampala, Uganda
Sep 2012   *Interconnect Billing and Roaming Data Analyst*

- Processing and reconciling CDRs with the switch/network element statistics

- Modifying and implementing the Business rules and initiating change requests for mediation

- Carry out advanced CDR analysis and investigation

- Perform Returned Account Procedure(RAP) file processing

- Clearing suspense/rejected CDRs and (re)submitting them to the Billing system for (re)rating

- Establishing, implementing and reporting on the interconnect mediation revenue assurance controls (RACs)

- Ensuring timely completion of Transferred Account Data Interchange Group (TADIG) tests after IREG tests

- Monitoring of NRTRDE(Near Real Time Roaming Data Exchange) process for fraud detection

- Analyzing problems and incidents related to the billing system, SMS-C, and MSCs and other connected network elements on a daily basis

- Analyzing and resolving roaming related issues/tasks on a daily basis

- Submission of accurate and timely interconnect billing and roaming reports

- Identifying, analyzing and resolving or escalating system issues to vendors

Jan 2010 - Jan 2011   Orange Uganda Limited now Africell, Kampala, Uganda
Roaming and Interconnect Administrator

- Ensuring that all roaming Customer Details Records (CDRs) are sent to MACH (Clearing house) on a daily basis

- Ensuring that Transferred Account Data Interchange Group (TADIG) tests were completed within one day after IREG tests

- Monitoring of NRTRDE (Near Real Time Roaming Data Exchange) process for fraud detection

- Provision of daily and monthly interconnect reconciliation report to the Finance Department

- Provision of High Usage Reports (HUR)

- Administration and configuration of Interconnect Billing and Management system

2009 - 2013   Makerere University, Kampala, Uganda
Part-time Lecturer

I conducted lectures, set, supervised and marked exam for the following courses to Computer Science students (Bachelors and Diploma) in Makerere University Department of Computer Science:

- Numerical Analysis

- Further Linear Programming and Network Analysis

- Discrete Mathematics

- Computer Literacy

- Programming Methodology

- Fundamentals of Mathematics

- Computer Architecture

| **2009 -** | Kampala University, Kampala, Uganda |
| **2010** | *Assistant Lecturer* |

I conducted lectures, set, supervised and marked exam for the following courses to Computer Science students in Kampala University School of Computer Science:

- Computer Programming
- Computer Literacy
- Calculus I
- Discrete Mathematics

Accomplished Projects

- I have managed to automate all Roaming, Interconnect and Loyalty Campaign related processes and reporting with in a period of one month after joining Tenotree Corporation
- I was part of the team involved in the implementation of UTL Prepaid Commission Model, Churn, Prediction Model and Micro Segmentation of UTL's Subscriber base
- Implemented a real time raw CDR collector for prepaid UTL customers which resulted into timely, accurate reporting and support for running various promotions (awakening and activation bonus promotions)
- Implemented a software solution using Perl to generate notification Tap files for UTL inbound roamers. This saved the company 40000 Euro that was required for regeneration of over 100,000 notification by the Clearing house
- Implemented a software solution using Perl to correct billing information for RAPs (Rejected Tap files for UTL inbound roamers)
- Implemented a raw CDR decoder using Perl for MSC (mobile switch)
- Managed to resolve major Tap file exchange challenges between UTL and Data Clearing House (DCH). This helped the company to recover from huge revenue losses that were caused by files aging before reaching the DCH. This was achieved by implementing a number of controls and quality checks like successful ftp delivery reports
- I was involved in the design, analysis and implementation (using python) of UTL bonus airtime model which came in handy during a number of acquisition campaigns
- Implemented the good number algorithm in python for classification of UTL free number pool
- I implemented a Near Real Time Roaming Data Exchange (NRTRDE) solution for roaming fraud detection using python which save UTL over 100,000USD that was to be charged by the vendor to implement the same solution. Solution is still being used by UTL

Key Competencies and Skills

- **Data Science**

  Excellent scripting skills in Python, Shell and Awk for advanced huge data manipulation
  Proficient in Machine Learning, Artificial intelligence, Data Mining, Data Warehousing and Data Modeling
  Practical knowledge in applying machine learning techniques to implement Forecasting, Classification and Regression tasks
  Knowledge of Data Visualization tools like QlickView and Tabluea
  Working knowledge in Big Data technologies - Hadoop, Hive, Pig and Flume
  Proficient in Microsoft Business Intelligence Suite (SSRS, SSAS and SSIS)
  Proficient with Microsoft SQL Server 2008/2012 - database architecture and administration
  ETL development using SSIS and Talend Open Studio
  Clustering for market micro-segmentation and Market Basket Analysis (Association mining)
  SQL tunning and designing parallel queries for data definition and manipulation

- **Software Engineering Skills**

  Programming and Scripting Languages: Python, Perl, Java, Awk, Shell, C, C++, LISP,ASP.NET, C#,
  VB.NET
  (Toolboxes: MATLAB, Octave, PRTOOLS, VLFEAT, CLOP
  Database Management Systems: Oracle, MSSQL, MySQL, Infobright
  Source version control: Mercurial, git
  Excellent knowledge in working with windows and Linux/Unix platforms

- **Soft Skills**

  Proficient in using Microsoft Office suite applications
  Excellent communication, leadership, interpersonal and pedagogical skills
  Management skills and ability to work with a team
  High level of motivation and self-drive

Research Groups (Membership)

- **Artificial Intelligence in the Developing World (AI-Dev)**
- **TADIG (Transferred Account Data Interchange Group)**
- **NRTRDE(Near Real Time Roaming Data Exchange)**
- **Mobile Roaming**
- **Interconnect/ Inter Carrier/CABS Billing**

Referees

Name	Dr. Washington Okori	Dr. Ernest Mwebaze
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