# Sandeepthi Balumuri

# Sr. Business Systems Analyst

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| A resilient self-starter and reliable team player with 8 years of experience in the healthcare industry. In-depth knowledge of thorough business processes in a healthcare organization, Payer Systems, and Health Insurance field (healthcare programs) with a solid understanding of Business Process Management, Business Process Modeling, and Business Process Reengineering. |

# PROFESSIONAL SUMMARY

* Expertise in the Healthcare domain with a focus on concepts such as **HIPAA, HITECH, False claim act, FDA guidelines, FHIR, ICD 10, HEDIS, Electronic Health Records (EHR), Patient Monitoring Devices, Healthcare Clearing House**.
* Well versed in **Health Insurance Domain** that includes Health Insurance coverage, **Explanation of Benefits (EOB)**, **Health Maintenance Organization (HMO)**, **Preferred Provider Organization (PPO)**, **Point of Service (POS)**, **Electronic Data Interchange (EDI)**, **FACETS** configuration tools, **Medicare, Medicaid,** **Claim Payment Processing,** about **EDI 5010**, **ANSI X12 837, 835, 834, 999, 270/271**. Expertise knowledge in **Diagnosis Coding Standards** like **SNOMED CT**, **ICD-9**, **Diagnosis** **Related Group** (**DRG**) **Payments**, **5010** **standards, Billing, Membership, Revenue Cycle Management, Claims management**.
* Experience in working with different **software development lifecycle methodologies** such as **Waterfall, Scrum,** and **WaterScrumFall.** In-depth understanding of other industry approaches like **Scaled agile framework, XP, Kanban,** & **Scrumban**.
* Conducted various analysis such as **Feasibility Analysis, Risk Analysis, Cost-Benefit Analysis, SWOT analysis, Root cause analysis, Impact Analysis**, and performed **GAP Analysis** to identify the gap between the **AS-IS and TO-BE business processes.**
* Analyzed the business needs and gathered various business requirements such as **Functional, Nonfunctional, GUI, and Data requirements** from **technical** and **business stakeholders** using various elicitation techniques such as **Interview**, **Survey** (Questionnaire), **Brainstorming, JAD**, **Document analysis**, **Focus groups**, **Requirements workshop**, **Reverse engineering,** etc.
* Analyzed and documented the Business requirements, assisted in **Business case development**, translating, and simplifying requirements. Created artifacts such as **Business Requirements Document** **(BRD),** **System Requirements Specification** **(SRS), Functional Specification Document** **(FSD), Requirement traceability matrix (RTM),** and **Business case document** per needs.
* Worked with Project Manager in creating a **Project Charter, Project management plan, Project Schedule, Work Breakdown Structure (WBS), RACI matrix, Gantt chart, Critical path analysis, Earned Value management.**
* Experienced in creating various **Unified Modeling Language (UML)** **diagrams** such as **Sequence diagram, Activity diagram, and Use Case diagrams**, proficient in creating prototypes such as **Wireframes, Mockups, UI designs, Business process model notation (BPMN),** also **Process flow and workflow** using **MS Visio, Balsamiq, and Lucid Chart.**
* Experienced working in a scrum environment and was part of various **Scrum Ceremonies**, efficiently document various **scrum** **artifacts** such as **Product Backlog, Sprint backlog, Release burn up - burn down charts, Sprint burn up - burn down charts.**
* Met individually with team members and stakeholders as needed. Iron out **team disagreements** about the process and **work styles**.
* Worked with the product owner in **requirement elaboration**, defining **MVP, Definition of Done**, writing **Acceptance Criteria**.
* Extensive knowledge in **breaking** **epics** into **user stories** according to **SMART** and **INVEST** criteria by vertical or horizontal slicing technique, prioritized and estimated the product backlog items using **prioritization techniques** such as **MoSCow**, **KANO**, **Value-based prioritization**, and **estimation techniques** such as **Planning poker**, **Relative mass valuation**, and **T-shirt** **sizing**.
* Mentored the empowered teams and served as the leadership **proxy,** guiding, and supporting the team during the transition to the **Agile** - **Scrum** **Framework**, and continuously fostered a **positive team dynamic** to maximize the **team's performance**.
* Assessed **risks**, **issues**, **impediments** and possess in-depth knowledge in **Requirement &** **Change Management**, **Risk Register**, **Defect Management**, **Release Management**, **Project Management**, & **Risk Management** using **HP ALM**, and **MS Project.**
* Performed Analysis to Identify **Sources**, **Targets** and wrote the **Transformation Rules** for the process of **Data Migration**. Involved in **Conceptual, Logical models** and created **ER diagrams** **(Entity Relationship)** for **data modelling phase**.
* Explicit insight on **Databases**, **Table Structures**, **Data marts**, **Data Analysis**, **Data Integration**, **Data Modeling**, and **Schemas**.
* Participated in **Extraction, Transformation, and Loading** process using tools like **Informatica, AWS glue** and carried out Online Analytical Processing **(OLAP)** operations like **Drill Down, Roll-Up, Slice** and **Dice, Pivot** and **Online Transactional Processing**.
* Performed **API** **end point validation** using **Postman** and **SoapUI**, documentation using **Swagger** to capture **the Headers, Query Parameters**, **Resources**, **POST/PUT** **response body** and received different **error codes**. Mapped the designed **URLs** for the **RESTful APIs** to the business requirements and operations by using **Three tier architecture** and **Service Oriented Architecture.**
* Executed various **data retrieving** and **data validation** tasks using **SQL queries** like **Joins**, **Select,** **Sub queries**, **Aggregate functions**. Proficiency in Procedures and Functions used tools like **MS SQL Server, Postgre SQL** and **MySQL Workbench**.
* Knowledge of the best methods for agile testing, like **Behavior Driven Development (BDD)**, **Acceptance Test Driven Development (ATDD), Test Driven Development (TDD),** **Continuous Integration**, **Automated testing**, and **built-in quality**.
* Worked with the QA team to develop **test plans, scenarios, and test cases,** contributed to **Black-box Testing**, **Functional Testing**, **System Testing**, **Integration Testing**, **Regression Testing**, **Security Testing**, **Load/Stress Testing**, and **Performance Testing.**
* Performed **User acceptance testing,** participated in **defect tracking, defect analysis,** **documented defects and tracked changes.**
* Expertise in project management tools such as **Jira, Confluence, and SharePoint**, and have extensive knowledge in understanding Business Intelligence tools like **Tableau, Power BI, Amazon QuickSight** and created **interactive dashboards** with **Bar charts**, **Heat maps**, **Tree maps**, **Time series graph**, **Ad-hoc reports, Key Performance Indicators (KPI’s), Write back reports,** etc.,

**TECHNICAL SKILLS**

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| Healthcare and Healthcare Insurance Domain  | HIPAA, HITECH, Medicaid, Medicare, Patient Segmentation, ICD-9, ICD-10 CM, GxP, Claim Processing, Electronic Health Records, EDI, Facets |
| Software Development Life Cycle | Agile-Scrum, Scrum-Waterfall, Waterfall, XP, SAFe, Kanban, Scrumban |
| Testing Tools | HP-QC/ALM, Cucumber, Load Runner, POSTMAN, SOAP UI, Selenium |
| Business Skills | Change Management, Impact Analysis, JAD Sessions, Project Planning, Project Scheduling, Issue Management, Conflict Management  |
| Business Modelling Tools | MS Visio, Lucid Charts, Balsamiq |
| Project Management Tools | JIRA, HP ALM, MS SharePoint, Confluence, MS Project |
| BI and Reporting tools | Tableau, MS Office Suite (Excel, Word, PowerPoint), SQL Server Reporting Service (SSRS), Amazon QuickSight, Kibana, Power BI |
| Architecture/Framework | Service-Oriented Architecture (SOA), 3-Tier Architecture, n-Tier Architecture |
| Databases and ETL Tools | MS SQL Server, My SQL, Oracle, Azure Synapse, Informatica Power Center, and AWS glue |
| Data Modeling | Conceptual, Logical, Physical, E-R Diagrams, Dimensional Data Models, Star, Snowflake schema |
| Data Warehousing | EDW, Data marts, ETL, OLTP, OLAP, Slice/Dice, Drill Down/Roll Up, Pivot |

**Lyra Health, Burlingame, CA**  **June 2022 to Present**

**Sr. Business Systems Analyst**

**Telemedicine System with Workflow Management System**

Envisioned and implemented a **Telemedicine System** using **Azure** for Lyra Health. This initiative aimed to **offer virtual consultations** to **employees of corporate partners**. Achieved a substantial **60% enhancement in healthcare accessibility, coupled** with **impressive cost reductions of 70%-75%,** while elevating **patient satisfaction by 80%.** The project maintained a **stringent focus on security** and **compliance, ensuring the utmost data privacy**.

**Roles and Responsibilities:**

* Evaluated the quality of care provided by the telehealth platform using relevant **telehealth-focused metrics** and **KPIs** in accordance with healthcare industry standards **HIPAA, HL7, FCA, HIE, PHI, ICD, FHIR, HEDIS, ISO, and GDPR**.
* Performed **Document Analysis** and created **Process Flow Diagram (PFD)** to perform **Cost Benefit Analysis**, **Risk Analysis** and **GAP Analysis** by understanding the **AS-IS** **process flow** and collaborated with the team to design the **TO-BE process flow**.
* Interviewed **stakeholders** and **subject matter experts** **(SMEs)** to gather **Business requirements** by performing various elicitation techniques such as **Brainstorming**, and **Joint Application Design (JAD**) sessions and created **technical design documents.**
* Created various **mockups** and **dynamic wireframes** using **Balsamiq** to help the **stakeholders** understand the process flow and get inputs on **UX/UI design**. Created **process flow diagrams**, **use case diagrams**, and **activity diagrams** using a **MS Visio**.
* Conducted **story writing workshop**s and worked with the **Product Owner** in writing **User Stories**, **Acceptance Criteria**, framing **Definition of Ready (DOR)**, and **Definition of Done (DOD)**, worked with **PO** in **prioritizing** the user stories and defining **MVP**.
* Utilized **Azure DevOps** to create **User Stories** that comply with the **INVEST criteria**, and meticulously defined **Acceptance Criteria** for each User Story. Worked in close collaboration with the team to establish clear requirements for the **Definition of Ready** and **Definition of Done** and in facilitating **slicing, prioritization, and estimation techniques** for User Stories such as **Vertical slicing, MosCow Technique and Planning Poker** respectively.
* Conducted extensive analysis to discover and **extract clinical data from various types of Relational Databases (RDBs),** and skillfully ingested this data into **the target Azure Data Lake** with the support of a **data analyst in the Azure environment**.
* Identified the different **data sources**, participated in the **ETL process** using the **Informatica PowerCenter**, performed **transformation**, and loaded the data into the **Azure Data Lake**. Creating **OLAP queries** for **report formatting** and **static report**.
* Collaborated with **Data Architects** to define **API specifications**, ensuring seamless **integration** and **data transfer** between the **telemedicine platform** and **external systems**. Monitored **API performance** and recommended **enhancements**.
* Worked closely with the development team to document **API endpoints**, **data schemas**, and **request/response formats**, providing comprehensive documentation for **maintenance** and **scalability** of the system using **Swagger** and tested using **Postman tool**.
* Leveraged **SQL queries** using **Joins, GroupBy, Aggregate functions, and Ranking functions** to segment **patient populations** based on factors such as **age, gender, medical history**, and **treatment response** enabling **data-driven decision** making.
* Communicated **data mapping documents** to testing team for **validation of ETL logic** and **results.**
* Collaborated with **QA team** to **create** and **manage** effective **test cases, test plans, and test scenarios** utilizing **Micro Focus** ensuring **traceability** throughout the lifecycle. Facilitated **User Acceptance Test** **(UAT)** activities and documented **feedback**.
* Created and managed user stories, epics, and tasks in **Azure DevOps**, capturing and **organizing requirements, user needs**, and **project deliverables**, providing a clear **roadmap** for the **development team** and **stakeholders**. Developed and maintained **project documentation** in **Confluence**, including **user manuals**, and **process flow**, ensuring **accurate** and **up-to-date information**.
* Developed **visually** appealing and user-friendly **Power BI** reports to present **key performance indicators (KPI’s)**, **treatment outcomes**, and **patient data trends** to support evidence-based **decision-making** and enhance the **effectiveness** of patient treatment.

**Environment: Agile – MS Office, Balsamiq, MS Visio, Scrum environment, Informatica PowerCenter, Java, Azure Logic Apps, Azure Active Directory, Azure Data Lake, Swagger, Postman, SQL, Micro Focus, Azure DevOps, Confluence, Power BI.**

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| **United Health Group, Hyderabad, India Aug 2016 to Sept 2020** **Technical Business Analyst** The project focused on improving the efficiency and effectiveness of the healthcare services provided by a **medical center**. It was mainly focused on integrating **Electronic Health Records** **(EHR)** with **Salesforce Health Cloud** and providing a **360-degree** view of patients to **health care professionals**, improve collaborative treatment and **customer relationship management (CRM)** with the various features of **Salesforce Health Cloud.** |

**Roles and Responsibilities:**

* Learned relevant technologies to support the design, development, and deployment of **Salesforce Health Cloud**, as well as interaction with **AWS Redshift** for **Business Process Re-engineering (BPR)**.
* Networked with various stakeholders, **subject matter experts** **(SMEs)**, conducted **Interviews, Surveys, Questionnaires**, created **AS-IS workflow** and by **documenting the needs** of the business, drafted **the TO-BE process**, and **validated the GAP Analysis**.
* Actively participated in the **upfront planning and designing phase**. Created **artifacts** such as **Business specification document (BRD), Functional requirements document (FRD), and Software Requirement Specification (SRS).**
* Created enterprise business process modeling **(BPM),** **UML diagrams** such as **activity diagram**, **sequence diagrams** using **Lucid Chart** as a collaborative modelling tool, created **low-fidelity** and **high-fidelity mockups** and **wireframes** using **Figma** tool.
* Created a **Release Planning Document** consisting of a **high-level overview** of all the requirements to be released in the **upcoming sprint** and worked with the **Product Owner** **in creating a pre-defined release schedule.**
* Actively took part in determining the **cadence** for the sprint based on the Capacity of the team, facilitated, and participated in **Scrum Ceremonies such as Backlog Refinement, Sprint planning, Daily Standup Sprint review, Sprint Retrospective** meetings**.**
* Facilitated meetings with **Salesforce Admin**, **Developers**, and **Architect** to determine the data that needs to be integrated from **AWS Redshift** into **Salesforce Health Cloud**, analyzed the data of **EHR** such as **Administrative** and **billing data**, **Patient demographics**, **medical histories**, **Allergies**, **Radiology images**, Lab, and test results by **mapping** them into **objects** and **fields**.
* Focused on converting data to **FHIR format** to achieve a comprehensive view of patients transitioning from **Hospital Discharge** to **Long-Term Care**, and **Home Health**. Collaborated with the **Salesforce Admin** to create a **patient field** reflecting reliability level and implemented encryption for **PHI** and **PII**, enabling a centralized **360-degree patient view** for improved **forecasting**.
* Facilitated **two-way integration** with **MuleSoft** **API manager**to synchronize **AWS Redshift data** with **Salesforce health cloud** to connect **EHR**, facilities and **procedures**, **environmental information**, **credit**, and **claim information** of patients.
* Leveraged **SQL queries** to perform **data assessment**, **analysis**, and **validation** by retrieving from the backend. Utilized **Joins, views,** and **Subqueries**, also demonstrated **proficiency** in working with **procedures**, **triggers** to enhance **data validation**.
* Actively collaborated with **Testing team** in various types of testing such as **Integration tests**, **Regression Tests**, **Performance Tests**, and **User Acceptance Tests (UAT)** and report **test results**. Analyzed **Test Performance reports** through **Zephyr.**
* Leveraged insights to enhance **customer satisfaction** and improve the **net promoter score** **(NPS)** by identifying and resolving **bottlenecks,** ensuring timely care for members. Worked with the testing team in creating **analytics dashboards** using **Power BI**.

**Environment: MS Office 365, Lucid Chart, Figma, Waterfall-Scrum Hybrid, Salesforce Health Cloud, AWS Redshift, MuleSoft API, SQL, Zephyr.**

**TATA AIG, Hyderabad, India Sep 2015 to July 2016**

**Business Analyst**

**Electronic health insurance eligibility monitoring project**

A system which peruses and sends **electronic health insurance** eligibility data of employees periodically and resolve eligibility exceptions across multiple plans the organization subscribes. The system aims at addressing **Dual-entry, data quality** complying with **HIPAA** conforming to the **security and accuracy of the transmitted data.**

**Roles and Responsibilities:**

* Worked in **Waterfall Methodology** and extensively participated in **Software Testing Life Cycle (STLC) phases**, **Requirement Analysis, Test Planning, Test Case Development, Environment setup, Test Execution and Test cycle closure.**
* Performed **Interviews** and **document analysis** along with facilitating **Joint Application Development (JAD) Sessions** and **Requirement workshops** to gather the required data and furnish **requirements**.
* Assisted in **identifying best practices** to maintain data integrity in **healthcare and systems information** **management**.
* Worked with business users to create **UML diagrams** like **Use cases, Activity** and **Sequence diagrams** using **MS Visio.**
* Created the **Requirement Traceability Matrix (RTM)** and worked with in defining **Entry** and **Exit Criteria.**
* Participated in **daily standup** to aid the team at addressing **user input** to better modify the system to suit **customer requirements**.
* **Data profiling** and **cleansing** activities to enhance the **correctness** of the data and **eliminate redundancies** and **loss of data**.
* Assisted in **mapping** and integration of data from various **RDBS**, **Flat files** to perform **data integration**, **validation,** and **normalization** to maintain **accuracy** and **effectiveness** of the data.
* **Developed, documented,** and **maintained** functional test cases and other test artifacts like the **test data**, **data validation**, harness scripts and automated scripts using **HP QC**. Assisted in **Defect Life Cycle** Management and assisted in creating **Issue logs**.
* Assisted in the **User Acceptance Testing** and coordinated with the **UAT team** to schedule and assist the business users in understanding the features and capabilities and assisted in **Testing**.
* Created **Reports and Dashboards** using **Tableau** to communicate with the business stakeholders the **status** and **performance**.

**Environment: MS Office, MS Visio, Waterfall, Informatica PowerCenter, SQL, Tableau.**

**Clinnovo Research Labs, Hyderabad, India                                                                                                   Mar 2014 to Sep 2015**

**SAS Programmer**

**Roles and Responsibilities:**

* Generated summary tables, listings and graphs using SAS/BASE, SAS/MACROS, SAS/GRAPH and SAS/STAT.
* Prepared new datasets from raw sets files using Import Techniques and modified existing datasets using Set, Merge, Sort, Update, Formats and Functions.
* Reviewed Statistical analysis plans and worked with statisticians and clinical staff to generate a data summary, analysis and reports.
* Created new datasets from existing data sets by using concatenation, merging, interleaving and using conditional statements.
* Defining, Manipulating, Controlling and Reporting/Storage (Query Language) of Clinical Data by using PROC SQL.
* Review ADaM datasets, annotated eCRF, SDTM mapping document.
* Produced Ad hoc reports of various kinds like Listings and Tables as per the requirement.
* Generated required charts, graphs and reports using PROC REPORT, PROC GPLOT and SAS/GRAPH for graphical analysis.
* Developed, tested, and maintained daily/monthly/quarterly report packages illustrating progress toward the company’s strategic objectives.
* Checking documents and specifications were consistent and complied with company standards by providing input into specifications of analysis datasets, listings, summaries, figures and tables.
* Created reports in RTF, PDF, Excel and HTML formats using ODS statements.
* Developed macro programs defining the macro parameters using different debugging options like IMPRINT, MLOGIC, and SYMBOLGEN.

**Environment: MS Office,** Base, STAT, GRAPH, SQL, Macro, ODS.

**Education:**

Master's Program in Pharmaceutical and Analytical Science with an aggregate of 'A' from Huddersfield University, UK.

Bachelor’s in pharmacy with an aggregate of 69% from Bojjam Narasimhulu Pharmacy College for Women, affiliated by J.N.T.U in India.