Projects Completed

1. **Advanced Analytics Implementation** (TrendyTech):
   * **Goal**: Use advanced analytics to better understand customer behavior and preferences.
   * **Stakeholders**: Marketing team, IT department, customer service, product management, customers.
   * **Context**: Increasing trends in personalized e-commerce experiences and advancements in data analytics and machine learning.
2. **User Experience (UX) Redesign** (TrendyTech):
   * **Goal**: Redesign the website to improve user-friendliness by incorporating personalized recommendations and easier navigation.
   * **Stakeholders**: IT department, product management team, customers.
3. **Customer Data Platform (CDP) Integration**:
   * **Goal**: Aggregate customer data from various sources to enable targeted marketing and personalization.
   * **Stakeholders**: IT department, marketing team, customers.
   * **Context**: The need for robust, scalable solutions aligned with technological advancements.
4. **Loyalty Program Development**:
   * **Goal**: Introduce a rewards program for repeat purchases and user engagement.
   * **Stakeholders**: Marketing team, customers, suppliers, and service providers.
5. **Business Analytics Spectrum Exploration**:
   * **Goal**: Understand how organizations can leverage data to transition across the Business Analytics Spectrum—from reports to optimization models.
   * **Stakeholders**: Senior management, operational teams, IT staff.
   * **Context**: Organizations struggle with recognizing and applying their data to create actionable insights.

**1. Advanced Analytics Implementation:**

* **Objective**: Implement advanced analytics for TrendyTech to understand customer behavior and preferences better.
* **Tools**:
  + Data analytics tools (unspecified but could involve Python, SQL, or machine learning frameworks based on context).
  + Customer Data Platform (CDP).

**2. User Experience (UX) Redesign:**

* **Objective**: Redesign TrendyTech's website for improved navigation and personalized recommendations.
* **Tools**:
  + Web development tools (HTML, CSS, JavaScript).
  + Analytics tools for tracking customer interaction.

**3. Data Flow Diagram (DFD) for Various Scenarios:**

* **Objective**: Create a Level 1 Data Flow Diagram using LucidChart for one of the following scenarios:
  1. A customer buying a hot dog at a convenience store.
  2. A data analyst building a dashboard in Excel.
  3. A customer ordering pizza online.
  4. A patient checking into a hospital for a routine evaluation.
* **Tools**:
  1. **LucidChart**: Cloud-based diagramming tool.
  2. **Excel** (for dashboard-related scenarios).
  3. **Gane and Sarson Method** for DFDs.

**4. Mapping Patient Data Flows During Hospital Admissions:**

* **Objective**: Create a data flow map that includes patient check-in, medical record retrieval, medical evaluation, and billing information flow.
* **Tools**:
  + **LucidChart**: For creating the diagrams.
  + Hospital information systems (for real-world application).

**5. Business Analytics Spectrum Exploration:**

* **Objective**: Explore the progression of analytics tools from reporting to optimization models for actionable business intelligence.
* **Tools**:
  + Data visualization tools: Tableau, Power BI.
  + Predictive analytics and optimization tools.

**1. Transitioning Credit Card Handling System:**

* **Objective**: Evaluate and transition to a new system for handling credit card processing, considering customer service, security, operational efficiency, and technological alignment.
* **Tools**:
  + **Business Rules Metric Model**: Evaluate vendors based on performance, flexibility, and compliance with defined metrics.
  + **Loshin’s Requirements Analysis**: Framework for defining system requirements and performance indicators.
  + **Excel**: For data analysis and metric modeling.

**2. On-Time Delivery Metrics for GrubHub:**

* **Objective**: Create a metrics model to evaluate and improve on-time deliveries.
* **Tools**:
  + **Stoplight Metaphor**: Use a color-coded stoplight model (green, yellow, red) to represent performance.
  + **Data Analysis Tools**: Analyze delivery data to determine timeliness and categorize into performance levels.
  + **Visualization Software**: Tools like Excel or LucidChart for graphical representation.
* **Methodology**:
  + Define thresholds for on-time, slightly late, and significantly late deliveries.
  + Visualize data dynamically based on performance.

**3. Data Flow Diagram (DFD) Development:**

* **Objective**: Map out data flows for scenarios such as customer purchases, hospital check-ins, or data dashboard creation.
* **Tools**:
  + **LucidChart**: Cloud-based diagramming tool.
  + **Gane and Sarson Method**: Standard for DFD creation.
* **Requirements**:
  + Include at least one external entity, data store, and multiple processes.
  + Maintain level 1 depth with clear flow alignment.

**4. Business Metric Model for Customer Service:**

* **Objective**: Develop a one-page metric model for customer service performance.
* **Tools**:
  + **Excel**: Provided as an example file for metric modeling.
  + **Visualization Techniques**: Apply color coding and graphical representation for clarity.
* **Key Focus**:
  + Audience: Operational managers and decision-makers.
  + Metrics: Satisfaction rates, response times, issue resolution percentages.

**5. Balanced Scorecard Integration:**

* **Objective**: Integrate performance indicators into a cohesive Balanced Scorecard (BSC) and Data Flow Diagram (DFD).
* **Tools**:
  + **LucidChart**: For DFD and metric visualization.
  + **Excel or BI Tools**: To measure and track performance indicators.
* **Rubric Focus**:
  + Topic depth, cohesion, and technical alignment in diagrams and models.

**6. Decision-Making for Vendor Transition:**

* **Objective**: Create a report to support vendor selection for credit card processing, ensuring no confidential data is included.
* **Tools**:
  + **Metric Model**: Evaluate vendors based on technological advancement, cost, and operational alignment.
  + **Visualization Software**: Use clear, actionable visuals to communicate findings.

**1. Online Store Development at A&D High Tech**

* **Objective**: Develop an online store to enhance operational efficiency and generate sales during the holiday season.
* **Tools**:
  + **Microsoft SQL Server**: Database support.
  + **Microsoft IIS**: Web server.
  + **ASP**: Server-side scripting.
  + **Microsoft Site Server Commerce Edition**: Application components.
  + **J.D. Edwards ERP**: Integration with manufacturing and order management.
* **Key Features**:
  + Real-time payment processing.
  + Integration with ERP for backend support.
  + Development of a multi-tiered system with high scalability.

**2. Data Maturity Journey Assessment**

* **Objective**: Assess and improve organizational data maturity through structured stages (Patchwork to Democratized Analytics).
* **Tools**:
  + **Mode**: Data platform for analytics and automation.
  + **SQL & Python Tutorials**: For data literacy programs.
  + **Centralized BI Tools**: For improved reporting and collaboration.
* **Key Processes**:
  + Establishing centralized governance.
  + Creating a data literacy program.
  + Building advanced infrastructure for data-driven innovation.

**3. Requirement Elicitation for AD & D Tech**

* **Objective**: Analyze and document technical and business requirements for the AD & D Tech case study.
* **Tools**:
  + **Business Analysis Core Concept Model (BACCM)**: Framework for defining needs and stakeholders.
  + **LucidChart**: For diagramming requirements.
* **Deliverables**:
  + A 300–500 word summary of project needs, requirements, and stakeholders.

**4. Metric Model for Customer Service ​**

* **Objective**: Develop a visual metric model to monitor and evaluate customer service performance.
* **Tools**:
  + **Excel**: For calculations and graphical representation.
  + **Color-Coded Stoplight Metaphor**: Visualize metrics (Green, Yellow, Red).
* **Key Metrics**:
  + Customer satisfaction rates.
  + Efficiency in resolving customer issues.

**5. Data Flow Diagram (DFD) Creation ​**

* **Objective**: Map the flow of data in scenarios like hospital admissions or online pizza ordering.
* **Tools**:
  + **LucidChart**: For designing DFDs.
  + **Gane and Sarson Method**: Standard for creating DFDs.
* **Requirements**:
  + Include at least one external entity, data store, two processes, and four data flows.

**6. Balanced Scorecard Implementation for a Chosen Company ​**

* **Objective**: Research and apply the Balanced Scorecard (BSC) to evaluate a company’s performance metrics and change strategies.
* **Tools**:
  + **Balanced Scorecard Framework**: Focus on four quadrants—financial, customer, internal processes, and learning and growth.
  + **Data Visualization**: Excel or similar software for creating charts and presenting metrics.
* **Steps**:
  + Research company history, mission, and operations.
  + Map company performance to the four quadrants of BSC.
  + Write a detailed paper summarizing findings (500–1000 words).

**7. Metric Model for the Minnesota Wild**

* **Objective**: Use a Balanced Scorecard to measure the success of strategies for the NHL team Minnesota Wild.
* **Tools**:
  + **Balanced Scorecard**: Evaluate operational strategies.
  + **Data Research**: Collect information about organizational history and operational benefits.
* **Focus Areas**:
  + Benefits provided to customers (fans).
  + Operational improvements tied to strategy.

**8. Financial Reporting System Redesign for PDIG4U**

* **Objective**: Design and implement a world-class financial reporting system on a business intelligence (BI) platform.
* **Tools**:
  + **Business Intelligence Platform**: For centralized data aggregation and visualization.
  + **CRM and JD Edwards ERP**: Data sources interfacing with the BI platform.
  + **Excel and PowerPoint**: For data presentation and ad-hoc analysis.
  + **OLAP Server**: For data aggregation and presentation.
* **Deliverables**:
  + Data dictionary validation.
  + Standardized reporting templates.
  + Accessible dashboards with drill-down capabilities.

**9. From Concept to Reality: Perfect Business Analytics Team**

* **Objective**: Design an ideal business analytics team based on analytical competencies, interaction skills, and tools.
* **Tools**:
  + **Office Productivity Tools**: Word, Excel, PowerPoint.
  + **Communication Tools**: Email, chat platforms, video conferencing.
  + **Business Analysis Tools**: Visualization tools like Tableau or Power BI, data modeling software.
* **Framework**:
  + Analytical Thinking: Problem-solving for business cases.
  + Behavioral Characteristics: Ethical accountability and adaptability.
  + Interaction Skills: Team hierarchy and structure.

**1. Online Store Development at A&D High Tech**

* **Objective**: Develop an online store for operational efficiency and increased holiday sales.
* **Tools**:
  + Microsoft SQL Server, IIS, ASP.
  + JD Edwards ERP, Site Server Commerce Edition.

**2. Data Maturity Assessment Journey**

* **Objective**: Assess and improve organizational data maturity across five stages.
* **Tools**:
  + Mode Analytics, BI Tools, SQL, Python.

**3. Requirement Elicitation for AD & D Tech**

* **Objective**: Document technical and business requirements using BACCM.
* **Tools**:
  + LucidChart, Business Analysis Core Concept Model (BACCM).

**4. Metric Model for Customer Service**

* **Objective**: Visualize customer service performance metrics using stoplight charts.
* **Tools**:
  + Excel, Visualization Techniques.

**5. Data Flow Diagram (DFD) Creation**

* **Objective**: Map data flows for operational scenarios like hospital admissions.
* **Tools**:
  + LucidChart, Gane and Sarson Method.

**6. Balanced Scorecard Implementation ​**

* **Objective**: Apply the Balanced Scorecard to evaluate strategies for a selected company.
* **Tools**:
  + Balanced Scorecard Framework, Excel.

**7. Financial Reporting System for PDIG4U**

* **Objective**: Redesign financial reporting with centralized BI tools.
* **Tools**:
  + BI Platforms, JD Edwards ERP, OLAP Server, CRM.

**8. From Concept to Reality: Analytics Team Design**

* **Objective**: Design an ideal business analytics team.
* **Tools**:
  + Tableau, Power BI, Communication and Office Tools.