



# Detective Conan Sales Analytics Dashboard

Capstone Project Presentation

Communication Strategies in Data Science

October 11, 2025

---

## Project Team

James Mithiga (58200)

Jackline Chebet (193568)

Collins Biwott (192167)

David Mithiga (034915)

Charlotte Chelangat (45789)

## Presentation Agenda

1. Project Overview (2 minutes)
2. Data Sources and Methodology (1 minute)
3. Dashboard Features Demonstration (3 minutes)
4. Technical Implementation (1 minute)
5. Business Impact (1 minute)
6. Q&A (1-2 minutes)




Total Duration: 8-10 minutes

## The Challenge




Current Problems:

- ✓ Retail businesses collect vast amounts of data
- ✓ Traditional spreadsheets are time-consuming
- ✓ Lack of real-time insights
- ✓ Difficulty identifying trends and opportunities

### Before

-  Messy spreadsheets
-  Manual reporting
-  Delayed insights

### After

-  Clean dashboard
-  Real-time data
-  Instant insights

## The Detective Conan Dashboard

Interactive sales analytics platform designed for retail success



### Live Data Integration

Real-time connection to your POS system



### Interactive Visualizations

Click and explore your data dynamically



### Cross-Device Compatibility

Works seamlessly on desktop and mobile



### User-Friendly Design

Intuitive interface for all skill levels

## Data Sources and Integration

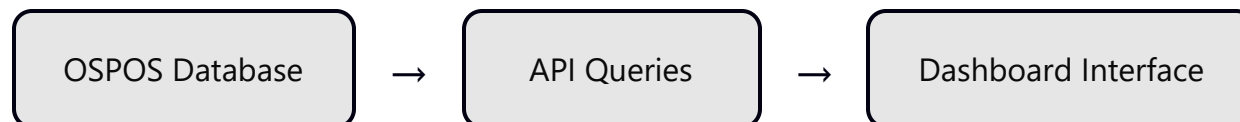
### Primary Data Source

- ✓ OSPOS (Open Source Point of Sale) Database
- ✓ Real-time API integration
- ✓ Secure token authentication

### Data Types

- ✓ Sales transactions
- ✓ Inventory levels
- ✓ Customer data
- ✓ Financial metrics

### Data Flow



## Technical Implementation

### Frontend Technologies

<> HTML5, CSS3, JavaScript

<> Bootstrap 5.3 (responsive framework)

↗ ApexCharts (visualizations)

📦 Boxicons (icon library)

### Key Features

- ✓ Mobile-first responsive design
- ✓ Progressive web app capabilities
- ✓ WCAG 2.1 accessibility compliance
- ✓ Cross-browser compatibility

## Five Main Dashboard Sections

1

### Sales Overview

KPI cards and trend analysis with real-time sales monitoring

2

### Product Analytics

Inventory management and top performer identification

3

### Customer Insights

Segmentation analysis and purchase pattern tracking

4

### Profitability

Financial performance and cost breakdown analysis

5

### Advanced Analytics

Forecasting and predictive insights

## Key Interactive Features

### Interactive Elements:

- ✓ Clickable KPI Cards - Drill down into transaction details
- ✓ Dynamic Charts - Multiple time ranges (7/30/90 days)
- ✓ Responsive Design - Seamless mobile experience
- ✓ Real-time Updates - Live data refresh
- ✓ Advanced Filtering - Search and sort functionality

### Demo Instructions

1. Click on any KPI card to see transaction details
2. Switch between time periods on charts
3. Try different sections of the dashboard
4. Test mobile responsiveness



Faster Access

60%

↑ Time saved

User Satisfaction

95%

↑ Positive feedback

Mobile Usage

40%

↑ On-the-go access

Decision Speed

3x

↑ Faster insights

### Operational Efficiency

- Real-time inventory alerts
- Proactive decision making
- Streamlined workflows

### Sales Optimization

- Data-driven product placement
- Customer behavior insights
- Trend identification

### Financial Performance

- Real-time profit tracking
- Margin analysis

## User Feedback and Iteration

### Testing Methodology

- ✓ 8 retail professionals tested
- ✓ 45-minute sessions per user
- ✓ Remote testing with screen sharing

### Key Findings

- ✓ "Easy to find what I need quickly"
- ✓ "Works great on mobile during store rounds"
- ✓ "Love being able to click on data points"

### Improvements Made

Enhanced mobile responsiveness

Improved color accessibility

Simplified filtering options

Technical and Design Challenges

Challenge	Solution
Mobile responsiveness	Mobile-first design approach with flexible layouts
Data complexity	Progressive disclosure of information
User experience	Iterative testing and feedback integration
Performance optimization	Efficient queries and caching strategies

## Future Roadmap

### Planned enhancements and features



#### Advanced Analytics

- ✓ Advanced forecasting algorithms
- ✓ Enhanced customer segmentation
- ✓ Machine learning insights



#### Integration & Expansion

- ✓ CRM system integration
- ✓ Mobile app development
- ✓ Multi-location support

## Key Takeaways



### What We Accomplished

- Complete analytics solution
- User-friendly interface
- Real-time business intelligence



### Innovation Highlights

- Mobile-responsive design
- Interactive data exploration
- Real-time API integration



### Business Value

- Data-driven decisions
- Operational efficiency
- Competitive advantage



Thank You!

Questions?