

# Interactive Dashboard Application for E-commerce Sales Analytics

Marcel Dietl, 27.01.2024

# **Task 1: Interactive Dashboard Application**

# Welcome Back to your Sales Analytics Dashboard!



Set custom filters to analyze your sales

2020-01-01 → 2023-12-31

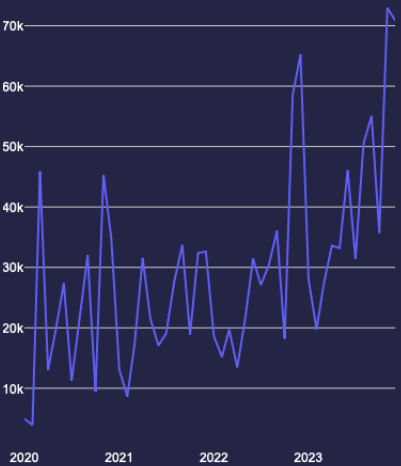
United States Germany France

Office Supplies Technology

## Total Sales

\$1,402,916

## Sales Volume



## Sales Distribution Insights



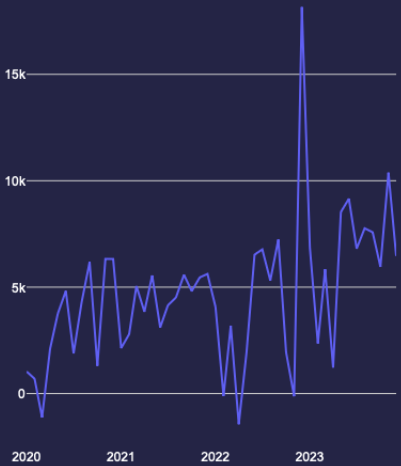
## Net Profit

\$222,592

## Profit Margin

15.87%

## Profit Over Time



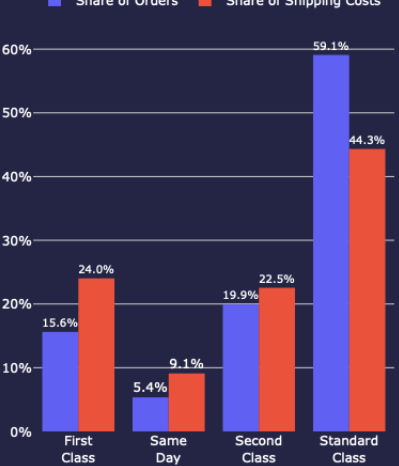
## Total Shipping Cost

\$125,671

## Average Shipping Cost

\$24.73

## Shipping Mode Information



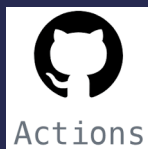
## Customer Insights



## Customers Favorite Products

1. Cisco TelePresence ...	\$33,957
2. GBC Ibimaster 500 M...	\$21,118
3. Canon imageCLASS ...	\$15,750
4. GBC DocuBind TL30...	\$13,455
5. Honeywell Enviracair...	\$12,627

## **Task 2: Cloud Deployment Architecture**



Automated deployments  
via CI/CD pipelines



Frontend

Backend



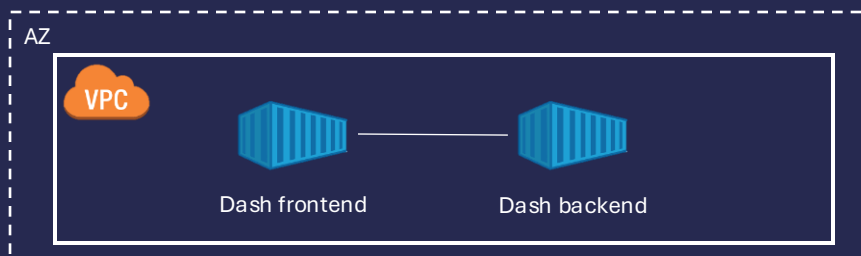
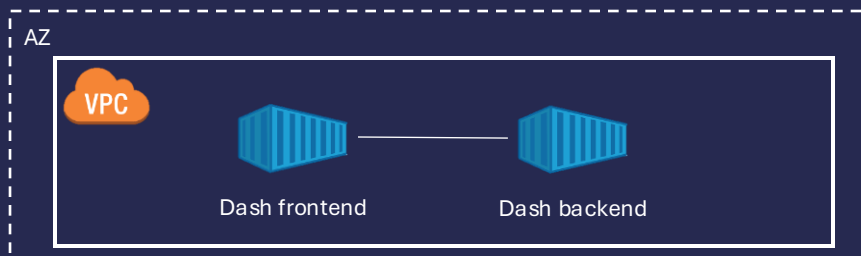
<https://dashboard.de>



Application Load  
Balancer (ALB)



Elastic Container Service on Fargate (serverless)



Elastic  
Container  
Registry

External  
Systems



Database (e.g., user data, caching, etc.)

# Potential Difficulties and Challenges



## Scaling

Auto-scaling based on  
custom CloudWatch Metrics



## Latency & Performance

Optimized data retrieval with caching  
Geographically distributed regions



## Security

Set up IAM roles  
Use SSL encryption



## Management Overhead

Avoid management of EC2  
instances by using Fargate

## **Task 3: Natural Language Integration**

