Mentor Sharing Session:

Nakama's Day-to-Day Activities

as Data Scientist
@ tokopedia

DigitalSkola

Hendy Fergus A. Hura

Sr. Data Scientist (Sept 2021 - Now)

EDUCATIONS

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01 SMAN 78

Class of 2007-2009
Accel. Program

02 B.Sc FMIPA UI

Mathematics,
Pure
&
Computational

03 M.Sc FMIPA UI

Applied Math.,
Bioinformatics
&
Pure

04 Math. UI

Researcher,
Advanced
HPC - Laboratory

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EXPERIENCES

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COMPANY 1

Gunadarma University

Statistics
&
Mathematics
Lecturer

COMPANY 2

Anterin™
BEBASKAN PILIHANKU

Data
Analyst/Scientist

COMPANY 3

Bluebird

Data Scientist

COMPANY 4

tokopedia

Sr. Data Scientist

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Skills & Tools

as Data Scientist

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DATA SCIENTISTS - MUST HAVE SKILLS

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MATH & STATISTICS

- Machine Learning
- Statistical Modeling
- Exploratory Analysis
- Clustering
- Regression Analysis

PROGRAMMING & DATABASE

- Computer Science Fundamentals
- Database Management System
- Data Visualization
- Python
- Big Data

DOMAIN KNOWLEDGE & SOFT SKILLS

- Inclination towards business operations
- Keen on working with data
- Problem solver
- Strategic, proactive, and cooperative
- Interested in hacking

COMMUNICATION & VISUALIZATION

- Storytelling skills
- Convert data-based insights into decisions
- Collaborative with Sr. Management
- Knowledge of tools like Tableau
- Visual art design

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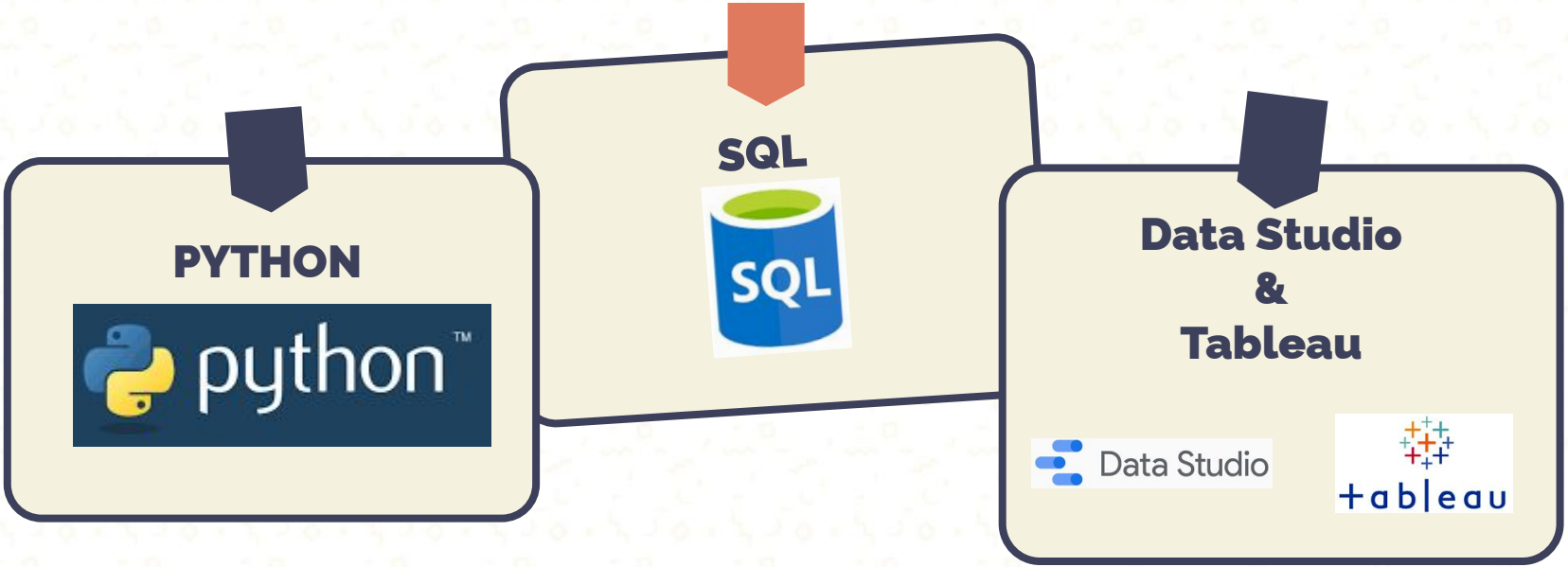
DATA SCIENTIST MAIN TOOLS



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DATA SCIENTIST FRAMEWORKS

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DATA RETRIEVAL & DATA ANALYSIS

Google BigQuery

jupyter

pandas

MACHINE LEARNING & DEEP LEARNING

scikit learn

Keras
Simple. Flexible. Powerful.

TensorFlow

PyTorch

Google Cloud Platform

VISUALIZATION

Data Studio

+ableau

Matplotlib

seaborn

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Activities

as Data Scientist

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DAY-TO-DAY ACTIVITIES

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Internal Meetings	Individual Works	Self-Improvement
Team Alignments	Coding	Growth Mindset
1-on-1 with Lead	Data Analysis	Make It Better
Projects Sprint Review & Planning	Modelling	Make It Happen
External Courses	Productionize ML/DL Models	Leaders Sharing
DS Transfer Learning	Model Performance Monitoring	
DS Fun Hours	Improving Dataset & Model	

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Data Scientist Products

Data Science Projects

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A Promo Optimization System using Machine Learning (POML)

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Promotions at Tokopedia

Tokopedia blasts **MILLIONS** of coupons every day.

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BUYER

91% coupon redeemers will revisit retailers that offer coupons

57% shoppers would have abandoned their purchase without a coupon

63% consumers spend **2 hours** each week searching for deals and special offers.

SELLER

- → **Boost** customer happiness and loyalty
- → Support new customer **acquisition**
- → Offload **excess** inventory

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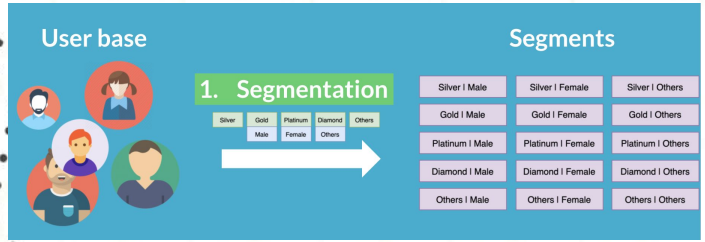
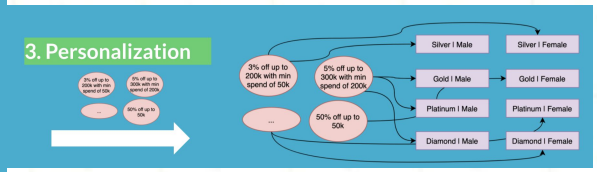
Conventional Approach





- ➔ Segment-level rather than individual-level decision making
- ➔ Handcrafted segmentation, targeting, and personalization rules. Expensive experimentation/optimization!

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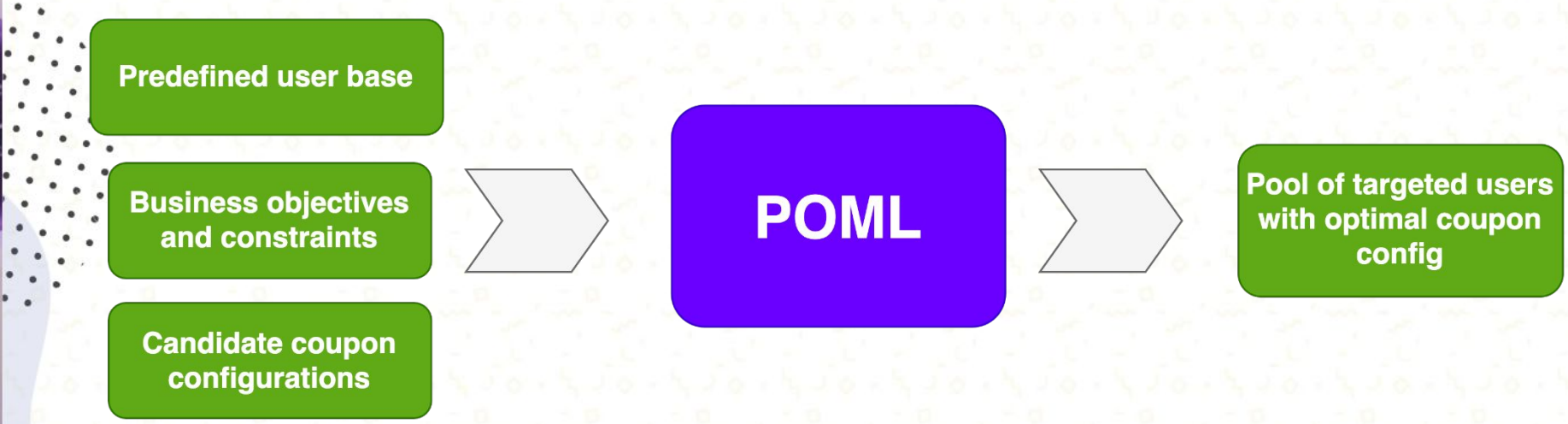
POML Input and Output



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POML Strengths

- **Personalization**: Individual-level decision making
- **Data driven**: Automatic targeting and personalization
- **Flexibility**: Optimize various business goals

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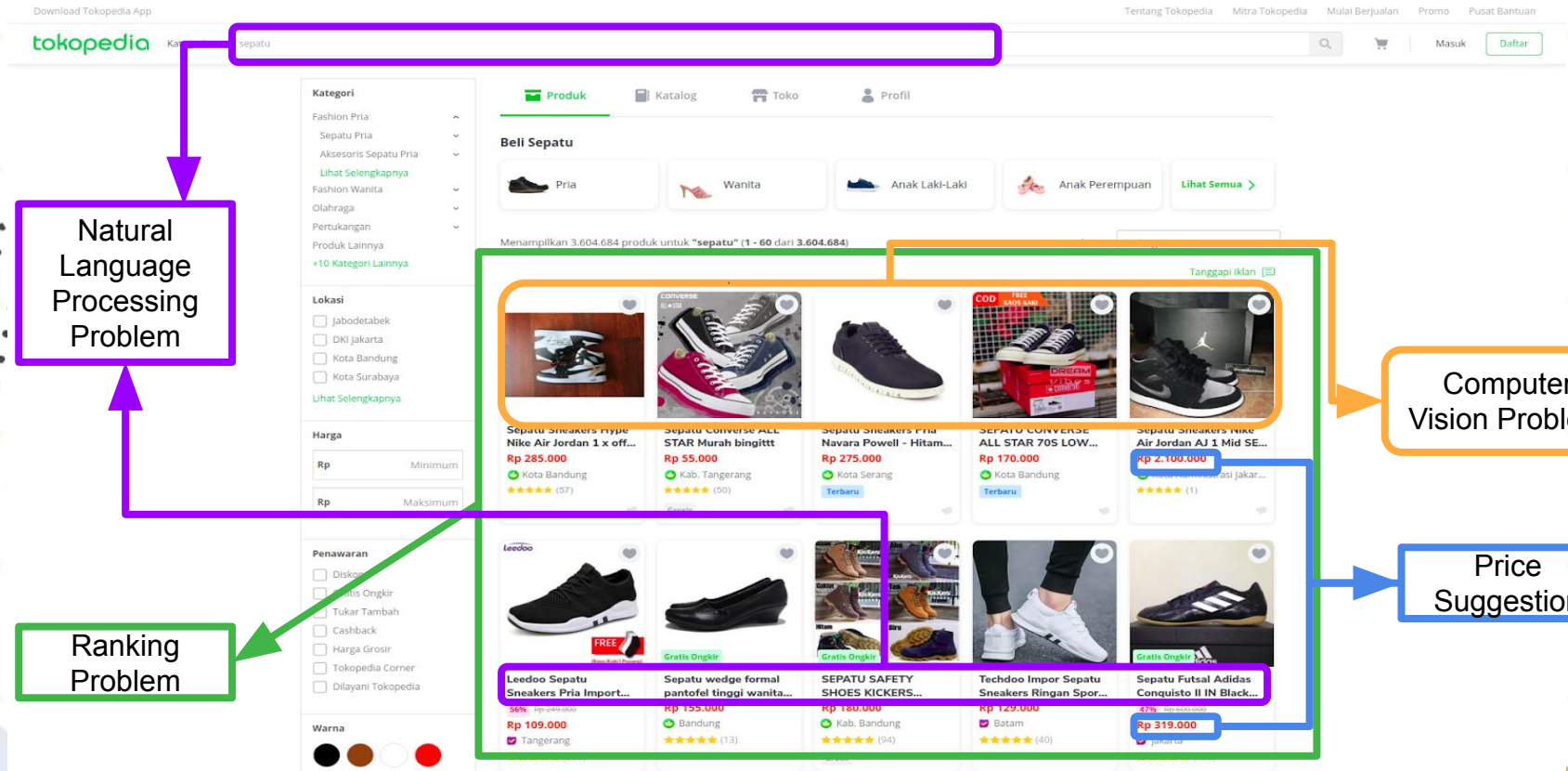
Other Use Case in Ecommerce



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Feel free to reach out!

Thank You

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