Big Data for ECommerce startup: A Golden Key or a Hype

About ShopBack and Myself

Our Mission

To create a world of smarter shoppers.

Enabling Smarter Decisions

ShopBack is a one-stop lifestyle portal that powers smarter purchase decisions. We are currently growing strong in 7 countries – Singapore, Malaysia, Indonesia, Philippines, Taiwan, Thailand and Australia.

ShopBack powers Taobao, Expedia, Lazada, ZALORA and more than 1,500 ecommerce merchants. Today, we are helping over 7 million users shop smart, save smart and live smart.

Thuan Le
Tech Group Manager at Shopback
Co-Founder of Data Science & Big Data VN

Agenda

- ➔ Part 1: Big Data: Do you really need it?
- ➔ Part 2: The right approach: From hiring to implementation
- ➔ Part 3: Big Data & ML for eCommerce: Real examples

Who is this sharing for?

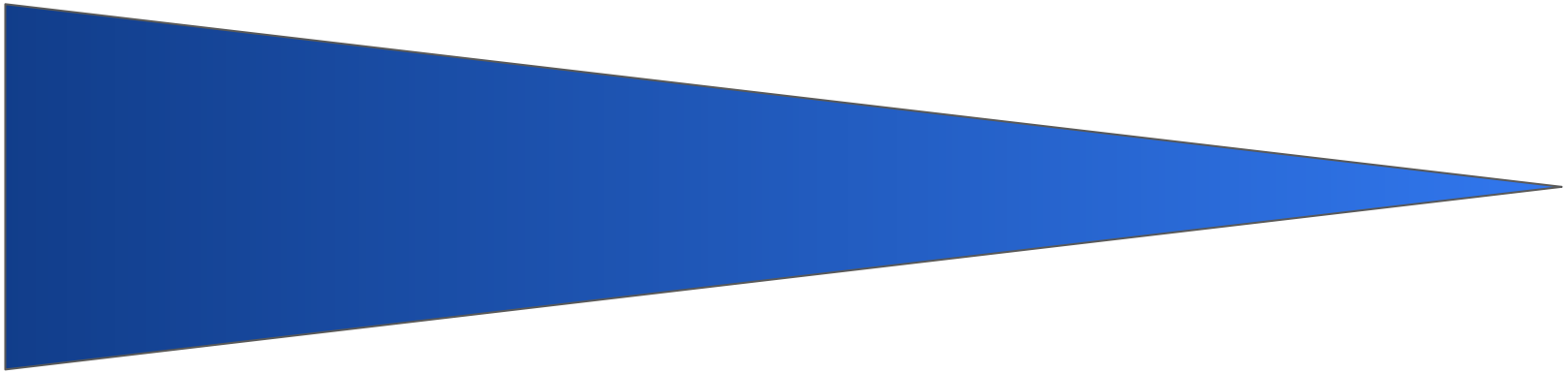
eCommerce startup interested in “Big Data”

- ➔ Business Manager
- ➔ Product Owner
- ➔ Engineering Manager

Part 1

Do you really need Big Data and ML?

Data-powered spectrum



Data is product	Data is critical	Data is competitive advantage

Data is product

- ➔ Big data and ML are product themselves
- ➔ Help businesses leverage existing data
- ➔ Provide data-powered insights to verticals
- ➔ Examples: Computer Vision, Chat Bot, etc...

Data is critical

- ➔ Data & ML are not product or service
- ➔ Rely heavily on data & ML for core business operations
- ➔ Can’t live without data & ML
- ➔ Examples: Go-Jek, Grab

Data is competitive advantage

- ➔ Business model does not depend on data & ML
- ➔ Data & ML help understand users: Purchase prediction, price optimisation.
- ➔ Examples: Lazada, Netflix

Where are these companies in the spectrum?

TENPOINT7

honestbee

vietnamworks
Move Up!

ZALORA
VIETNAM

YouNet Media
social listening & market intelligence

Data is product	Data is critical	Data is competitive advantage

Part 1 key takeaways

- ➔ Clearly identify where you are in the spectrum
- ➔ Understand impacts of data & ML
- ➔ Set expectations for key stakeholders
- ➔ Set priority for resource planning and execution

Many big data applications *fail at this phase*, not implementation phase

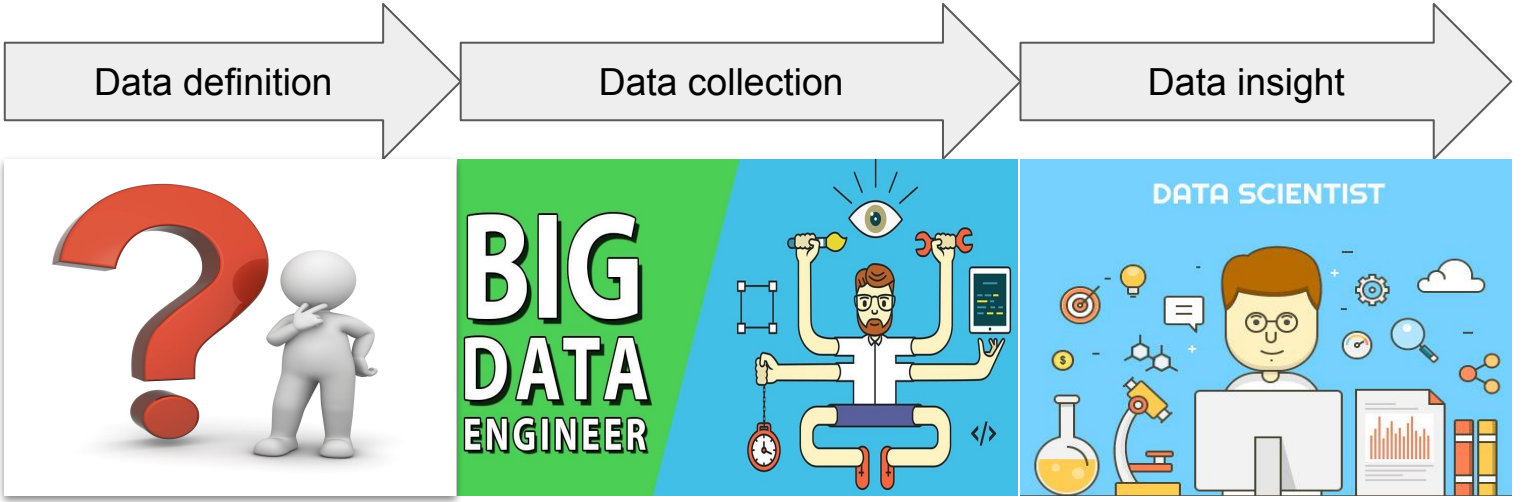
Part 2

Right approach from Hiring to implementation

Data engineer or Data scientist?

- ➔ Data engineers build data platform to collect huge amount of data
- ➔ Data scientists creates business insights from data
- ➔ Data engineers can be developed from software engineers
- ➔ Data scientists are usually trained under specialized curriculum
- ➔ Big Data & ML are not suitable for “self study”

Journey to big data: Right way vs wrong way



- ➔ Your first hire suggestion: An experienced data engineer
- ➔ Under tight budget, rely on open source for POC before building data science team

Big data hiring landscape

Job board	# data engineer related jobs	# data scientist related jobs
glassdoor	107,730	21,760
indeed	98,218	24,695
vietnamworks Move Up!	408	290

Source: datanami.com

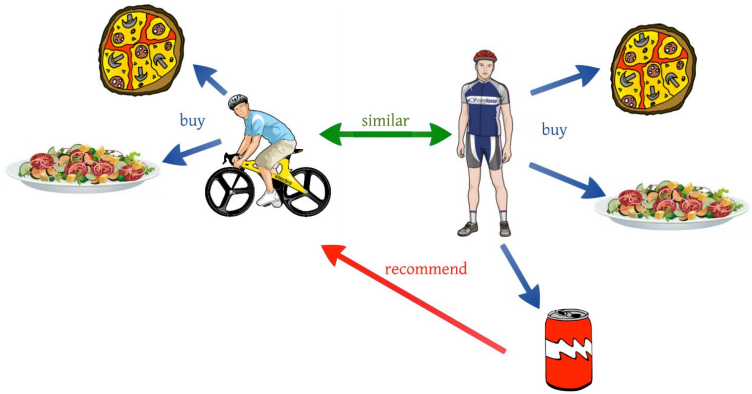
Part 2 key takeaways

- ➔ Proven *wrong* approach to start Big data & ML with:
  - ◆ Data scientist as your first hire
  - ◆ Self-study data engineering team
- ➔ Forget about “machine learning” until you have:
  - ◆ Understood what data you want to collect
  - ◆ Built your scalable data platform
- ➔ Prepare big $$$ for big data hiring

Part 3

Big Data & ML for eCommerce: Real Examples

Example: Recommendation Engine



➔ Proven success:

- Amazon: 35% orders made from recommendation engine
- Netflix: 75% movies watched from recommendation engine
- Netflix: 1B USD saved on marketing cost in 2015

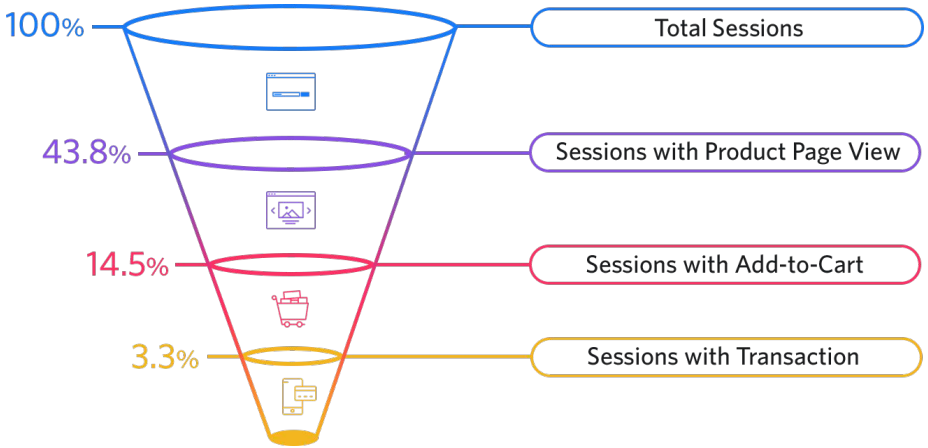
Example: Recommendation Engine

- Define data:
  - Action: Buy - Click - View
  - Item properties: Name, category…
  - User data: Age group, gender, location…
- Collect data: Build a scalable data pipeline with Spark, Kafka…
- Open source for recommendation engine: PredictionIO, Mahout, Raccoon…
- Build data science team when reaching open source limitations

Example: User segmentation

- ➔ Traditional segmentations: By user demography, geography...
- ➔ Data-powered types of user segmentations (Psychographic, Behavioral)
- ➔ Define and collect data
- ➔ Bring in a Data Analyst with analytical skills

Example: Funnel Analysis



- ➔ Traditional funnel analysis: Member signup, order complete...
- ➔ More insights from funnel analysis (expected page view, button click...)
- ➔ Define and collect data
- ➔ Bring in a Data Analyst with analytical skills

What else?

- ➔ Customer Journey Analysis
- ➔ Churn Prediction
- ➔ And more...

Join a relevant community to explore more!


THANK YOU
Available on the App Store
ANDROID APP ON Google Play
Shop Smart. Save Smart. Live Smart.