

LAPORAN KEGIATAN

**i-STAT:INTERNATIONAL WEBINAR OF STATISTICS
FUTURE OF DATA ANALYTICS IN THE AI**



OLEH:

Yudi Santoso,M.Kom

FAKULTAS TEKNOLOGI INFORMASI
UNIVERSITAS BUDI LUHUR
GASAL 2025/2026

HALAMAN PENGESAHAN

- 1 Judul Seminar : i-STAT: International Webinar Of Statistics
Future Of Data Analytics In The AI
- 2 Bidang Ilmu : Ilmu Pengetahuan dan Teknologi
- 3 Peserta :
 - a. Nama Lengkap : Yudi Santoso, M.Kom
 - b. Jenis Kelamin : Laki-laki
 - c. NIP/NIDN : 960029/ 0316017201
 - d. Jabatan Fungsional : Lektor
 - e. Jabatan Struktural : Dosen Tetap
 - f. Program Studi : Sistem Informasi
4. Tanggal Pelaksanaan : Selasa, 30 September 2025
- 5 Lokasi Kegiatan : Online
- 6 Lama Kegiatan : 1 (satu) hari
- 7 Biaya yang diperlukan : -

Jakarta, September 2025

Dosen Partisipan,



(Yudi Santoso, M.Kom)

NIP. 960029

KATA PENGANTAR

Dengan mengucapkan syukur Alhamdulillah, penulisan laporan i-STAT: International Webinar Of Statistics Future Of Data Analytics In The AI semester Gasal 2025/2026 yang berlangsung selama satu hari pada hari Selasa, 30 September 2025 dilaksanakan secara online (via *zoom*) selesai dikerjakan.

Laporan ini disusun sebagai bentuk tanggung jawab saya sebagai peserta kepada Fakultas Teknologi Informasi Universitas Budi Luhur. Mudah-mudahan bermanfaat bagi pembaca. Terima kasih kepada semua pihak yang telah memberikan kontribusi dalam penyusunan laporan ini. Apabila terdapat kekurangan dan kelemahan dalam penyusunan laporan ini, saya menerima saran dan kritik guna penyempurnaan lebih lanjut.

Jakarta, September 2025

Penulis

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I. KEGIATAN

1.1. Nama Kegiatan

i-STAT: International Webinar Of Statistics Future Of Data Analytics In The AI semester Gasal 2025/2026.

1.2. Latar Belakang

Tridharma Perguruan Tinggi yang selanjutnya disebut Tridharma adalah kewajiban Perguruan Tinggi untuk menyelenggarakan Pendidikan, penelitian, dan pengabdian kepada masyarakat (UU No. 12 Tahun 2012, Pasal 1 Ayat 9). Dosen sebagai anggota Sivitas Akademika memiliki tugas mentransformasikan Ilmu Pengetahuan dan/atau Teknologi yang dikuasainya kepada Mahasiswa dengan mewujudkan suasana belajar dan pembelajaran sehingga Mahasiswa aktif mengembangkan potensinya.

Dosen sebagai ilmuwan memiliki tugas mengembangkan suatu cabang Ilmu Pengetahuan dan/atau Teknologi melalui penalaran dan penelitian ilmiah serta menyebarkanluaskannya.

Workshop ini memberikan manfaat yang sangat besar bagi dosen-dosen terutama dalam mengembangkan ilmunya yang tentunya akan membantu pengembangan Fakultas.

1.3. Tujuan Kegiatan

i-STAT:International Webinar Future Of Data Analytics In The AI bertujuan untuk sharing atau berbagi ilmu dan pengalaman serta pengembangan kompetensi karier sebagai Dosen.

1.4. Pembicara Seminar

Amanda Permata Dewi, sebagai narasumber utama yang membagikan wawasan mendalam terkait *Future Of Data Analytics In The AI* . Diskusi

dipandu oleh Andi R., selaku moderator, yang mengarahkan jalannya webinar agar berlangsung interaktif dan sistematis.

1.5. Pelaksanaan Seminar

a. Pembukaan

Pelaksanaan seminar hari Selasa, 30 September 2025 Pukul 14.00 – 16.00 dilakukan secara Online via Zoom.

b. Pemaparan materi Sharing



i-STAT: International Webinar

FUTURE OF DATA ANALYTICS IN THE AI ERA

STATISTICS ST
FACULTY OF SCIENCE AND
UNIVERSITA
Amanda Permata Dewi

statistika-fst.ut.ac.id
statistika.ut
tistikafstut

To exit full screen, press **Esc**

FUTURE OF DATA ANALYTICS IN THE AI ERA

Presented By: Amanda Permata Dewi

01

HI I AM AMANDA

Data analyst with 6+years experience, specializing in marketing analytics, forecasting, and AI-driven initiatives

- 2024-Present
Data Analyst at AirAsia
- 2021-2024
Data Analyst at Tokopedia
- 2020-2021
Data Analyst at Style Theory

AGENDA

- 01 CONTEXT
- 02 Evolution of Analytics
- 03 Role of Data Analysts in AI Era
- 04 Case Studies
- 05 Future Careers
- 06 How We Can Prepare

02

FUTURE OF DATA ANALYTICS IN THE AI ERA



Explosion of Data in the Digital Era

Businesses generate massive amounts of data from mobile apps, websites, IoT devices, and social media

Traditional Analytics: Descriptive & Diagnostic

Methods rely heavily on SQL queries, Excel and BI dashboards

Shift Toward Predictive & Prescriptive Analytics

Requires more advanced tools, ML models, and data pipelines

AI as a Catalyst for Transformation

Artificial intelligence automates tasks, enhances insights, and drives innovation

CONTEXT

03

04

DESCRIPTIVE ANALYTICS

- Focus: reporting and summarizing past data.
- Tools: Excel, SQL, BI dashboards.
- Example: "Sales were \$1M last month."

DIAGNOSTIC ANALYTICS

- Goes deeper to find causes.
- Methods: drill-downs, correlations, root-cause analysis.
- Example: "Sales dropped because ad spend decreased and competitor promotions increased."

PREDICTIVE ANALYTICS

- Uses statistics, ML models, and historical data to forecast outcomes.
- Example: "We predict a 20% churn rate among high-value customers next quarter."

PRESCRIPTIVE ANALYTICS

- Provides recommendations and simulations.
- Methods: optimization models, scenario testing.
- Example: "Offer a 10% loyalty discount to reduce churn to 12%."

AI-AUGMENTED ANALYTICS

- AI and LLMs enable automation, real-time adaptation, and natural language queries.
- Example: "Chat with your data" → type or speak "Show me the top 10 products with declining sales" and instantly get insights

ANALYTICS EVOLUTION

05

Aspect	Before AI (Traditional Analytics)	With AI (Automated & Augmented Analytics)
Data Access	Analysts manually pull and clean data	AI automates ETL, real-time data pipelines, and data prep.
Business Questions	Requires SQL queries / dashboards created by analysts.	Natural language queries — anyone can "chat with data."
Time to Insight	Hours to days (data wrangling + reporting).	Minutes or seconds (AI-assisted exploration).
Role of Analyst	Report builder, metric reconciler.	Prompt engineer, insight validator, strategy advisor.
Scalability	Limited by analyst capacity.	Scales instantly across large datasets & multiple business users.

CASE STUDY 1

DATA ANALYST AS PROMPT ENGINEER

BACKGROUND

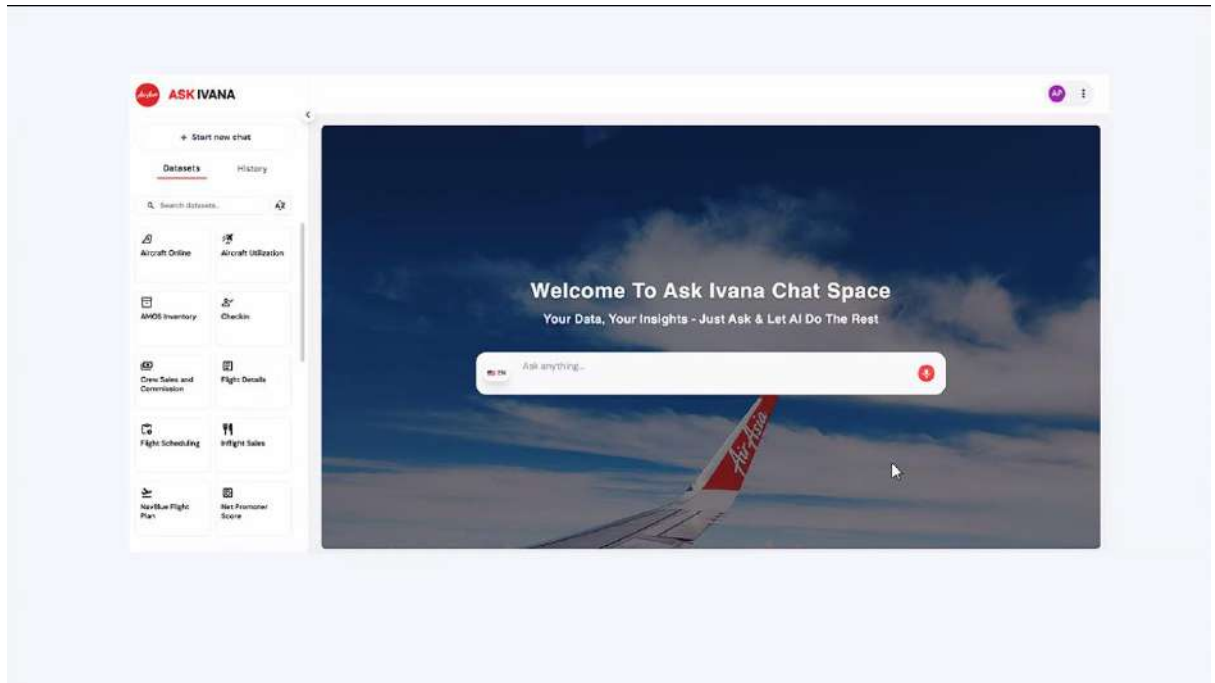
AirAsia collects huge volumes of customer feedback from booking platforms, social media, and in-flight surveys. Traditionally, analysts generated dashboards on flight delays, booking issues, and service ratings. But repetitive requests from different business units slowed insights delivery.

CHALLENGE

- Extract insights from unstructured feedback (complaints, suggestions).
- Multiple teams (operations, customer service, marketing) request overlapping but slightly different metrics, causing duplication.
- Traditional text mining + SQL analysis took days, reducing agility in addressing customer pain points.

SOLUTION: DATA ANALYST AS PROMPT ENGINEER

- Analyst leverages LLMs to classify and summarize customer feedback.
- Creates prompt templates for each department.
- Iterates on prompts to ensure accuracy and removes redundancy.
- Builds a self-serve interface where non-technical users can query in natural language.



DEMAND PLANNING FOR INFLIGHT SALES

BACKGROUND

AirAsia offers inflight meals, beverages, and duty-free items. Inventory planning is challenging because:

- Demand varies by route, season, and passenger profile.
- Overstock → wastage (especially food).
- Understock → missed sales opportunities and poor customer experience.

Traditionally, demand forecasting relied on **simple averages or rule-based heuristics** from historical sales, which didn't capture complex patterns.

CHALLENGE

- High variability in demand (weekday vs weekend, domestic vs international).
- Limited cabin storage capacity → need precise stocking.
- Manual forecasting took time and lacked accuracy.

CASE STUDY 2

CASE STUDY 2

DEMAND PLANNING FOR INFLIGHT SALES

SOLUTION: APPLYING XGBOOST FOR DEMAND FORECASTING

Step 1: Data Collection

- Historical inflight sales (SKU-level).
- Flight metadata: route, day of week, flight duration, time of day.
- Passenger load factor (seats sold).
- External features: holiday calendar, promotions.

Step 2: Feature Engineering

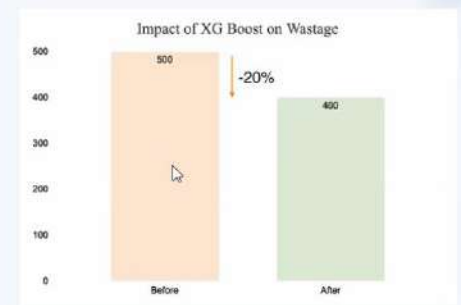
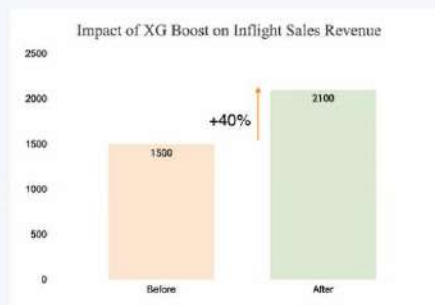
- Encode categorical features (e.g., route, meal type).
- Create lag features (e.g., last 3 flights' demand).
- Rolling averages (weekly, monthly demand trend).
- Holiday & promo dummy variables.

CASE STUDY

DEMAND PLANNING FOR INFLIGHT SALES

RESULT

- Reduced wastage by 20% (fewer unsold perishable items).
- Increased revenue by 40% (less stockout).
- Analysts shifted from manual Excel forecasting → model monitoring & refinement.





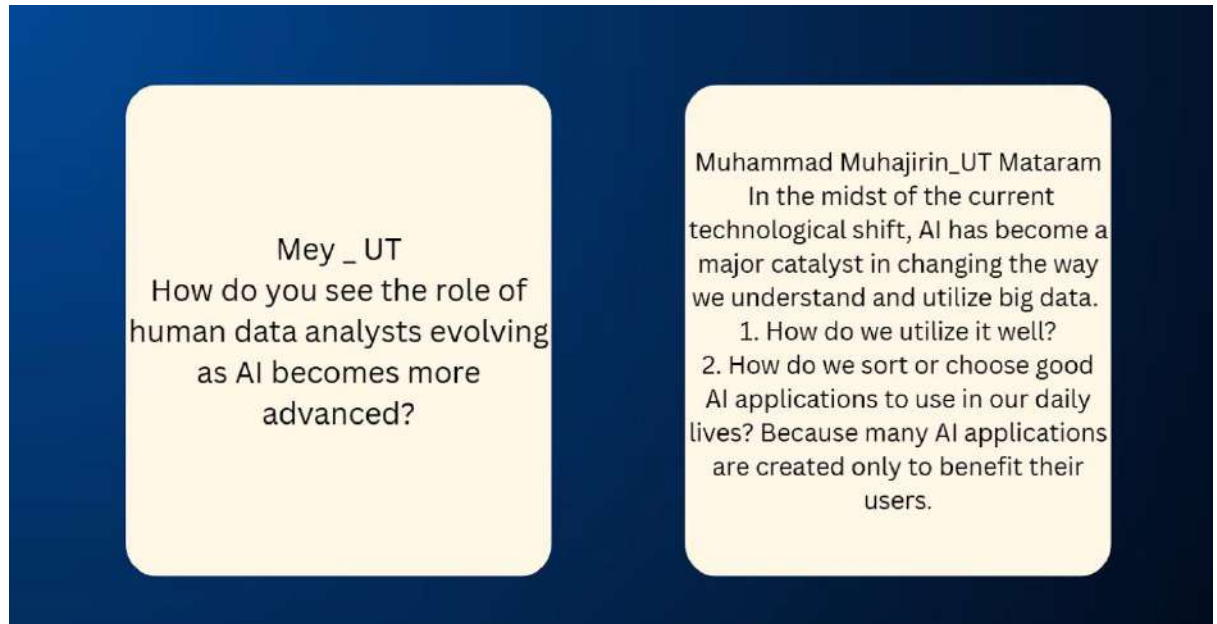
STRONG FUNDAMENTAL

Preparing for the AI era isn't about competing with AI – it's about collaborating with it. Build strong fundamentals, learn how to use AI as a tool, and focus on the skills that make you uniquely human: creativity, judgment, and ethics.

HOW WE CAN PREPARE

- Learn AI & Prompting Techniques
- Strengthen Core Analytics Skills
- Develop Critical Thinking
- Cultivate Domain Expertise
- Embrace Ethics & Governance
- Build Communication & Storytelling Skills

08



c. Penutup

Dengan adanya webinar internasional ini, diharapkan dosen mensupport mahasiswa menjadi analisis AI dengan memanfaatkan statistik dan konsisten mendukung pengembangan riset, inovasi, dan publikasi ilmiah mahasiswa, sekaligus mempersiapkan lulusan yang adaptif dan siap menghadapi tantangan dunia teknologi informasi di masa depan.



Certificate of Participation

Nomor: B/698/UN31.FST/PT.01.06/2025

The certificate is presented to:

Yudi Santoso

for the role as

PARTICIPANT

In the event

I-STAT: International Webinar of Statistics

"Future of Data Analytics in the AI Era"

Organized by

Statistics Study Program

Faculty of Science and Technology, Universitas Terbuka

Tuesday, 30 September 2025

Dean of Faculty of Science and Technology,

Universitas Terbuka



Dr. Subekti Nurmawati, M.Si.

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