



Creating Impact with AI

Impactive AI Service

We are innovators making new impacts
with artificial intelligence to make the future greater

**Impactive AI**

Machine Learning Based Prediction Solution for Enterprise

Companies' "Hidden distress"

64% of companies experience inventory loss



64%

**have experiences of
Inventory loss**

Inventory Shrinkage

Overstocked

Repeated management issues

Management costs and stress caused by failure to match inventory

- Accumulation of losses due to “overstock”
- Stress from “out of stock” and the emergency response
- Trust from customers will be sacrificed If supply can not fulfill demand
- Working-level workers are stressed because it takes a long time to place orders and manage inventory



Why does this problem happen?

The cause is 'failure of prediction'

- Out of stock due to failure to predict order volume
- New product demand forecast failure

Most management is a **post-hoc** method



Each company is trying to make its own predictions

Existing prediction methods remain limitation in their accuracy

- Limitation of existing statistical methods
- Most companies are focused on predictions in the past, limiting the usability of the field
- Lack of insightful predictive information (index)



New opportunity

Prediction will solve them

- Better predictability allows you to choose in a more favorable direction
- More accurate predictions of sales/shipments improve loss responsiveness
- Know the products that will sell well in advance and sell mainly on hit menus (switch to game that already wins and starts)

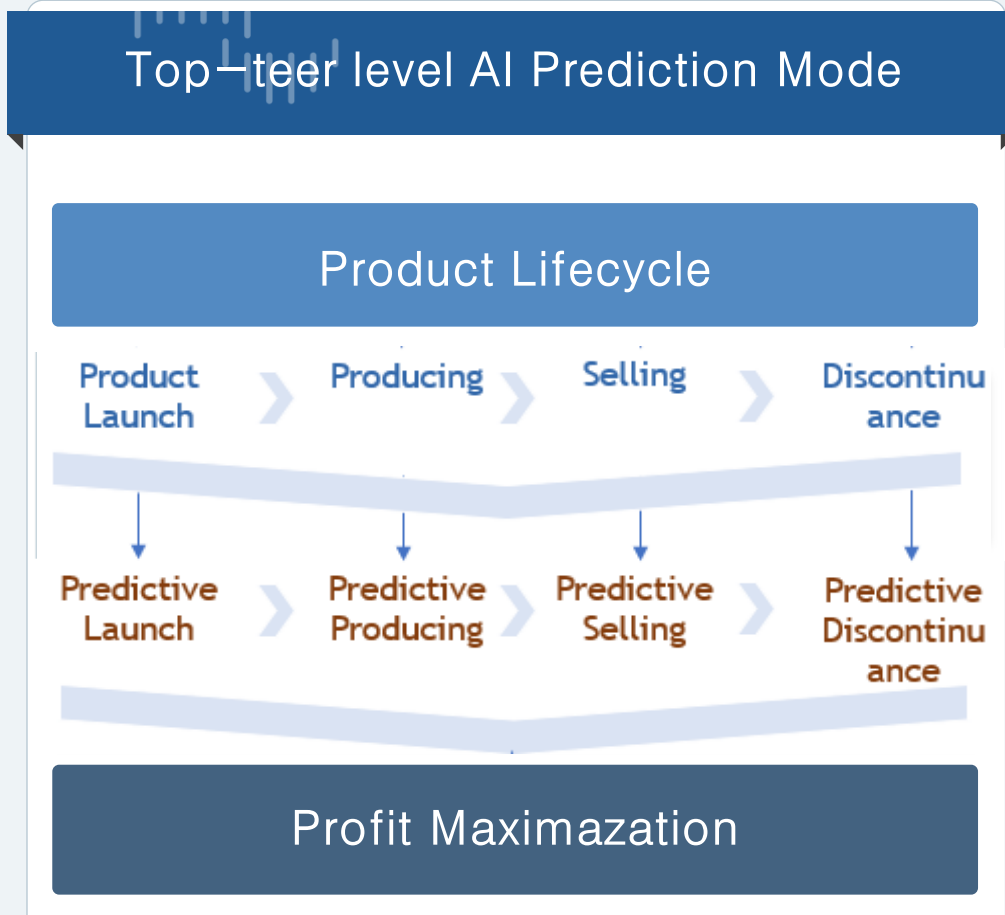
Transition to a **pre-hoc** response method



FAST and EFFICIENT



Impactive AI implements transformation to A 'predictive way' as a service with AI expertise



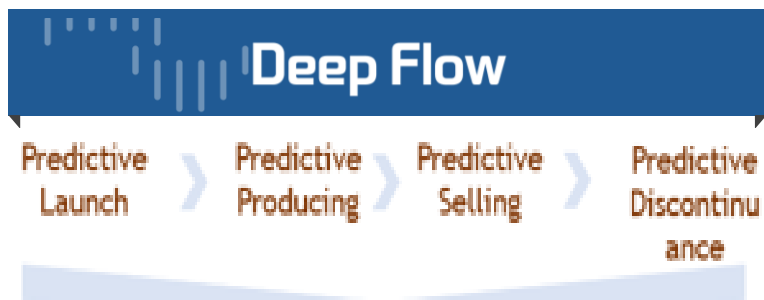
- > Product life cycle from launch to discontinuation
- > Applying AI predictive models to the entire lifecycle from product launch to discontinuation
- > Maximizing corporate profitability by transition to 'pre-hoc response'



“Providing SaaS for prediction solutions”

Core functions of Deep Flow

“Conversion to a predictive response system from before to after the launch of the product”



Module	Function
Predictive New Product Design Predictive launch	<ul style="list-style-type: none"> • Sales forecasting for the first quarter of the new product idea • Deduction in advance of the high-pitched and new product profile • Prediction of the possibility of failure of new product ideas • Prediction of total revenue in the lifespan and life cycle to discontinuation
Predictive Inventory Loss Prevention Predictive production /stock management	<ul style="list-style-type: none"> • Prediction of stock (monthly/quarter/year) • Prediction of stock shortage/overstock • Prediction of optimal production • Optimization of production schedule
Predictive Sales Planning Predictive sales	<ul style="list-style-type: none"> • Prediction of future sales (monthly/quarter/year) • Prediction of future revenue (monthly/quarter/year) • Prediction of optimal price of the product • Optimization of product portfolio
Predictive Model Service Predictive model management	<ul style="list-style-type: none"> • Management of AI model monitoring and update • Implementation of Transparent AI

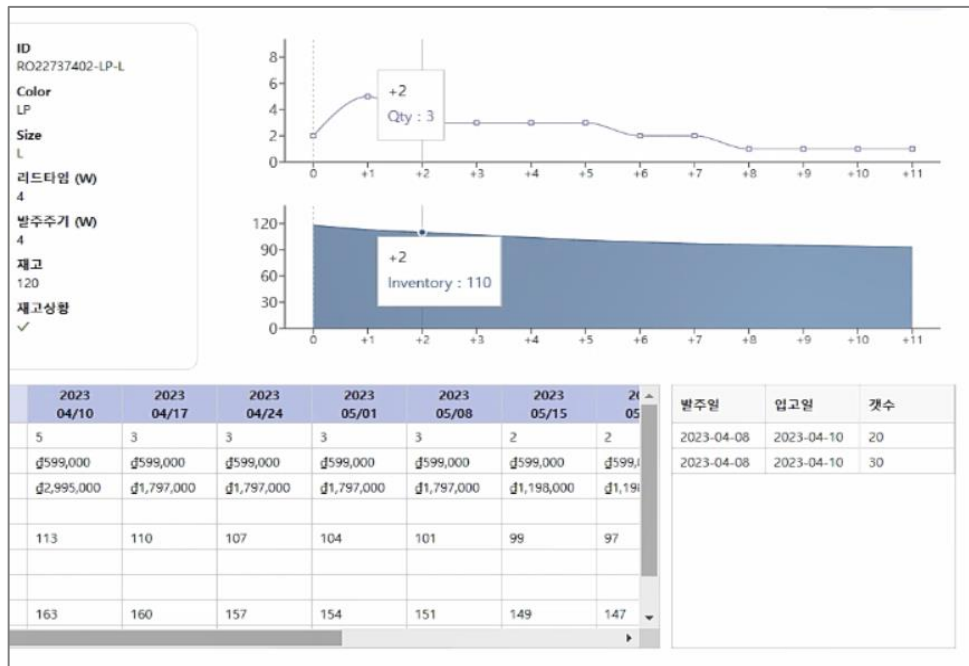


Use Case Example



Inventory Optimization based on AI demand forecasting

- Predict future inventory status through demand forecasting for each item
- Automatic calculation of product order quantity/ schedule to prevent inventory shortage and overstock
- Reducing demand-supply mismatch by optimizing inventory management to maintain safety stock levels



<그림> 딥플로우 예측적 재고관리 UI

Core index provided by the system

- ✓ TOP 10 past/future inventory turnover rates by item
- ✓ TOP 10 items expected to be overstocked next fiscal year
- ✓ Inventory frequency statistics and forecasts
- ✓ Ranking of the highest expected inventory loss next month



Use Case Example



Prediction of demand forecasting and inventory optimization

- Predict future order volume for each item with over 100 machine learning models (ex. Order volume after 1 week to 6 months)
- Strategically select key sales items by predicting customer order demand by season
- Supports construction of a sales portfolio focusing on highly profitable items by predicting which items will sell well

<Deep Flow predictive sales management support function UI>

수요예측 Demand

전체 품목(498) | 승인 품목(378) | 미승인 품목(20)

블랙버튼 블라우스

상위 품목: S BK #3E5322G-1, S WH #3E5322G-1, S GR #3E5322G-1, M BK #3E5322G-1, MWH #3E5322G-1, M GR #3E5322G-1, L BK #3E5322G-1, L WH #3E5322G-1, L GR #3E5322G-1

시계열 품목: S BK #3E5322G-1, S WH #3E5322G-1, S GR #3E5322G-1, M BK #3E5322G-1

블랙버튼 블라우스

상품명: 블랙버튼 블라우스

상품종류: S / BLK

SI 예측 수정 | 승인하기

인사이드 판매 보기

1월 2월 3월 4월 5월 6월 7월 8월 9월 10월

기간	8.14-8.27	8.28-9.10	9.11-9.24	9.25-10.08	10.09-10.22	10.23-11.05	11.06-11.19	11.20-12.03
판매량	200	200	200	200	200	200	200	200
재고량	0	0	0	0	0	0	0	0
발주 계획	0	0	0	0	0	0	0	0
평균 판매가격	20,000	20,000	20,000	20,000	20,000	20,000	20,000	20,000
매출액	4,000,000	4,000,000	4,000,000	4,000,000	4,000,000	4,000,000	4,000,000	4,000,000

새고관리 Inventory

전체 | 주문한 재고

모든 관리재고 | 안전재고 및 수요미달 항목 | 과잉재고 항목 | 상품별 관리재고 | 모든 재고

상품정보							재고정보		
대분류	중분류	상품명	사이즈	색상	품목코드	상품타그	현재재고	안전재고	재고상태
상의	블라우스	블랙버튼 블라우스	S	WT	DSJ20342	22/F 시즌오프	220	300	부족 주문
상의	니트	스퀘어 넥 니트	M	WT	RFJ29102	22/S 한정기획	200	180	안전 주문
상의	니트	스퀘어 넥 니트	L	BK	DSJ20342	초특가 세일	200	160	안전 주문
상의	니트	스퀘어 넥 니트	XL	WT	TUJ29102	22/F 시즌오프	120	200	부족 주문
상의	티셔츠	칼라를 하트 티셔츠	S	WT	TUJ29102	22/S 한정기획	100	200	부족 주문
상의	티셔츠	칼라를 하트 티셔츠	XL	GU	TUJ29102	초특가 세일	250	200	안전 주문
상의	티셔츠	칼라를 하트 티셔츠	L	GN	DSJ20342	초특가 세일	350	300	안전 주문
상의	티셔츠	칼라를 하트 티셔츠	S	WT	HYJ70147	22/F 시즌오프	180	300	부족 주문
상의	블라우스	골드포인트 블라우스	S	BK	HYJ70147	22/F 시즌오프	140	300	부족 주문
상의	블라우스	골드포인트 블라우스	M	GN	RFJ29102	22/F 시즌오프	120	300	부족 주문
상의	블라우스	골드포인트 블라우스	S	WT	JSJ20132	22/F 시즌오프	220	200	안전 주문
상의	니트	그린티캐이스 니트	M	GU	JSJ20132	22/F 시즌오프	120	200	부족 주문
상의	니트	그린티캐이스 니트	L	WT	DSJ20342	22/F 시즌오프	150	300	부족 주문
상의	니트	그린티캐이스 니트	XL	GU	JSJ20132	22/F 시즌오프	200	200	안전 주문



Use Case Example



Predicting the Future Performance of New Product Ideas

- Predicting success performance before New Product launch (to strategically launch best-profitable products)
- Nonlinear relationship of properties/functions of new products with sales performance is modelled via machine learning to predict sales performance with specific product properties and deduce a new product profile that is expected to create the most demand(sales).

<Deep Flow Predictive New Product Design UI>

The image displays two panels of a predictive product design UI. The left panel shows a '2023 상반기 티셔츠 디자인' (2023 H1 T-shirt Design) interface with a table of product rankings and a bar chart for '변동속성 판매지수 그래프' (Variable Property Sales Index Graph). The right panel shows a '트렌드 Trend' (Trend) interface with a '실시간 급상승 패션키워드' (Real-time Rapidly Rising Fashion Keyword) section, an '아이템별 트렌드 주기' (Item-specific Trend Cycle) line graph, and a '소비자별' (Consumer-specific) section with a pie chart and a table of age group percentages.

2023 상반기 티셔츠 디자인

컨셉 판매지수 랭킹 \updownarrow

순위	컨셉명	판매지수	성별	연령대	색상	넥형태	소매형태	핏	출시일	출시지역
1	3번 컨셉	90	남성	20대	BU	라운드넥	레귤러	오버	2023 1분기	서울
2	2번 컨셉	50	여성	20대	VT	스퀘어넥	레귤러	레귤러	2023 2분기	서울
3	1번 컨셉	20	여성	10대	BK	라운드넥	피프	박시	2023 1분기	서울

변동속성 판매지수 그래프

컨셉: 1번 컨셉 | 변동속성: 소매형태

1번 컨셉 정보

- 소매지 속성: 성별 (여성), 연령대 (10대), 의류 속성 (색상: BK, 넥형태: 라운드넥, 소매형태: 피프)

소매형태별 판매지수

레귤러, 피프, 레이스, 캡소매, 민소매, 피프, 피프, 피프, 피프, 피프

인사이트 요약: 1번 컨셉의 소매형태를 레귤러로 바꾸면 판매지수가 86점으로 상승해요! [속성 바꾸세요](#)

트렌드 Trend

실시간 급상승 패션키워드 \updownarrow

로우라이즈, 린넨 바지, 크롭티, 언더웨어, 크롭반팔티, 청반바지, 툴리워엄피스, 감정워커

아이템별 트렌드 주기

추이를 알고싶은 의류 카테고리들을 선택하세요.

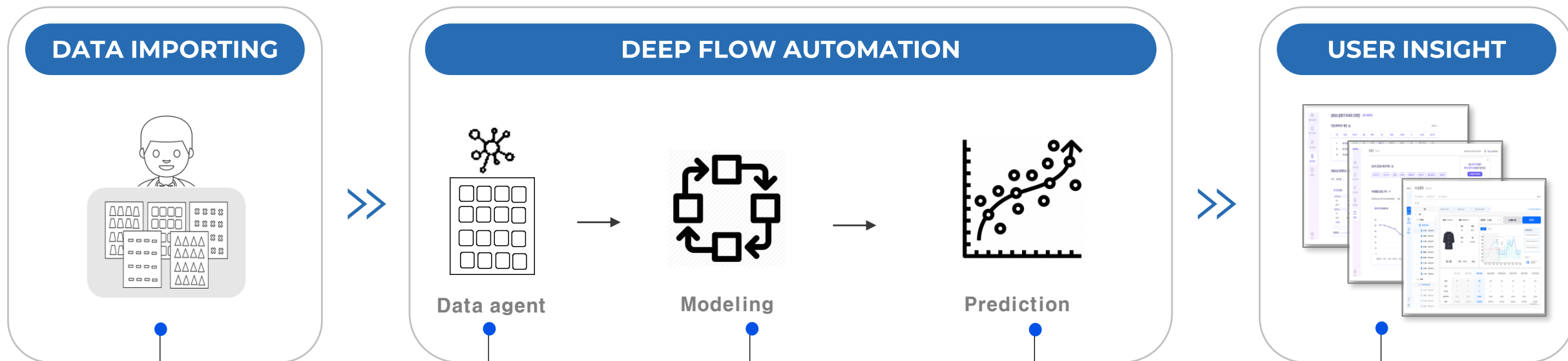
변두면 주간 검색량 추이: 0월 2주차, 3주차, 4주차, 7월 1주차, 2주차, 3주차, 4주차, 8월 1주차, 2주차

소비자별

성별	30%	70%
남성	34%	41%
여성	13%	11%

연령별: 10대 (34%), 20대 (41%), 30대 (13%), 40대 (11%), 50대 이상 (2%)

Operation process of Deep Flow



Using customers' data, Deep Flow build customized Prediction models

- Data importing of client company's product transaction history
- Including key variables such as date, product ID, category, price, sales volume, etc.

- Execution of data standardization tasks for AI model learning of data agents in Deep Flow.

- Automation of modeling such as data preprocessing, feature engineering, model learning, etc.
- Deduction the optimal model as a competitive method of over 100 models

- AI prediction task
- New product idea prediction, product life prediction, product life profit prediction, inventory loss prediction, sales prediction, etc.

- Periodic use by users to obtain insights that enable them to perform predictive management
- Predictive product planning UI
- Predictive sales UI
- Predictive inventory/production management UI

Collaboration with firms

Develop predictive systems to enhance decision-making in the context of developing new solutions and services, such as car infotainment systems, customer service, features

Predictive New Product Design

- Advance prediction of performance of new service idea
- Develop high-performing new products/new service profiles in advance
- Prediction of failure potential of new service idea

Customer Recommendation

- Development of customized product/service recommendation model for each customer
- Discovery of lead customers by product and brand
- Target customer prediction model and service development



Predictive Inventory Loss Prevention

- Develop ML-based price optimization model
- Optimize promotional discounts
- Pricing model based on user preference

Predictive Model Service

- AI model monitoring and update management
- Implementation of Transparent AI

Impactive AI CEO



Doohee Chung(Ph.D) – Chief Executive Officer

Academic Background and Experience

Year	Institute/Organization	Degree/Position	Major/Department
2021-Present	Impactive AI	CEO	
2018-Present	Handong Global University	Assistant Professor	Global Entrepreneurship and ICT
2021-Present	MIT Technology Review Korea	Chief Editor	
2020-2021	LG Group AI Advisory Professor	Advisory Professor	
2006-2012	Samsung Economic Research Institute	Senior Research	
2017	Seoul National University	Ph.D.	Technology Management

Impactive AI Key Personnel



Hye bong Choi(Ph.D)

Chief Data Officer

- Data Mining, Prediction Model Establishment, Bid data-based Analysis
- Former Researcher of A-Star IT Research Institute, Singapore
- Ph.D. in Computer Science of from KAIST



Chamgil Hong(Ph.D)

Chief Scientific Officer

- Machine Learning / Deep Learning Modelling, Intelligent System Development
- Former Engineer of Bosch and Siemens
- Ph.D. in Computer Science form University of Pittsburgh



Junghyun Park(Ph.D)

Chief Operating Officer

- Organization and Personnel Management
- Former manager of Milliken & Company Korea
- Ph.D. in Business Administration from Sungkyumkwan University



Heewon Jeong

Chief Technology Officer

- Cloud Service Development
- Former Backend and Frontend Developer of SK Planet and Onestore
- Former System Developer of POSCO



Jinseob Yun

Machine Learning Engineer

- <Venture Entrepreneurship Research> Machine Learning Prediction Model Research Best Paper Award
- Master of AI Convergence & Entrepreneurship from Handong University

Impactive AI Key Personnel



Seoyeong Kang(Ph.D)

Director

- Machine Learning Optimization/ Social Innovation
- Head of Data Science Group at Samsung Electronics
- Chief Data Scientist of Merrill Lynch
- Ph.D. in AI & Economics from Harvard University



Cheolhyun Jeong(Ph.D)

Director

- Developing Predictive Model for Manufacturing Companies
- Machine Learning/ Deep Learning Modelling
- Ph.D. in Industry Management Engineering
- Machine Learning Strategy and PM



최은창

Legal Consultant

- Contracts and Legal Risk Advisor
- Former Fellow of Yale Law School Information Society Project
- Ph.D. in Law from Seoul National University
- Master of Laws at Yale University



Jinwoo Lim(Ph.D)

Consultant

- Commercialization and Investment
- Former Consultant of Boston Consulting Group
- Former Senior Researcher at Samsung Economic research Institute
- Ph.D. in Business Administration from Stanford University



Jukka Rauhala (Ph.D)

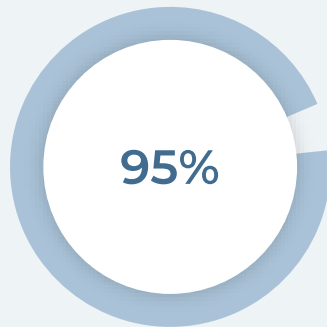
SW Engineering Advisory

- Former Engineer of Nokia Signal Processing
- Former Software Engineer of Voimaradio
- Ph.D. in Engineering from Aalto University, Finland

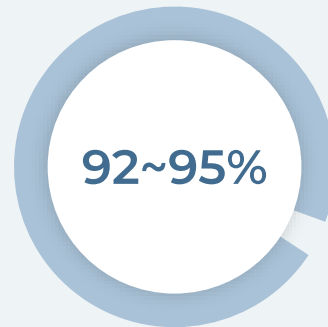
●● The competitiveness ●●

<Depth> AI technology advantage

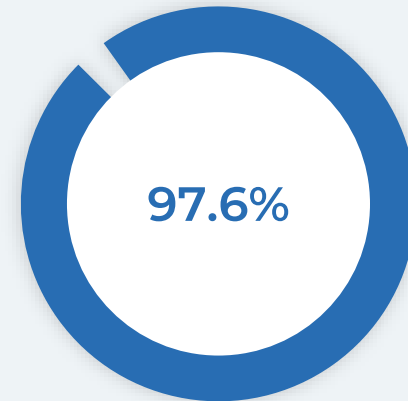
Performance of predictive models
(ex. Accuracy of prediction of human resource exodus)



IBM



Kaggle Highest link



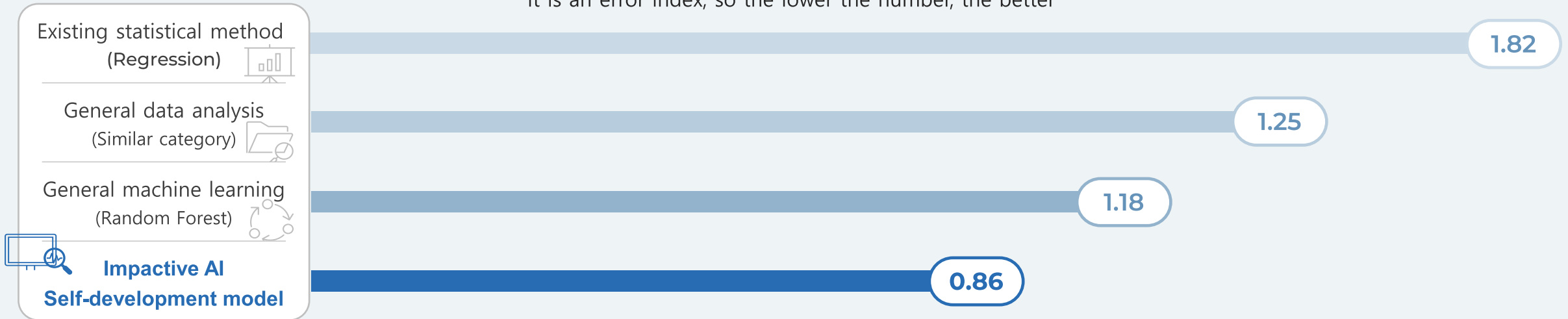
Impactive AI

● The competitiveness ●

<Depth> AI technology advantage

Accuracy of demand prediction for new products(MAE)

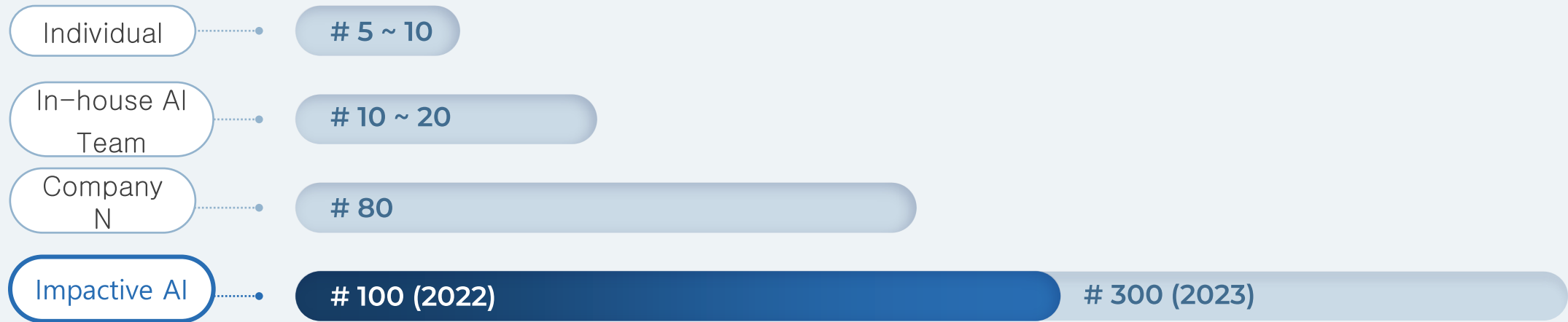
It is an error index, so the lower the number, the better



❖ The competitiveness ❖

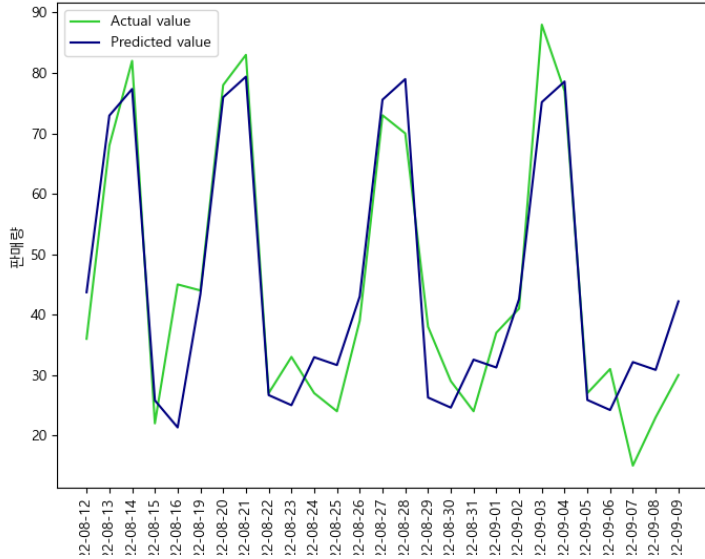
<Depth> AI technology advantage

The number of AI prediction models that operate

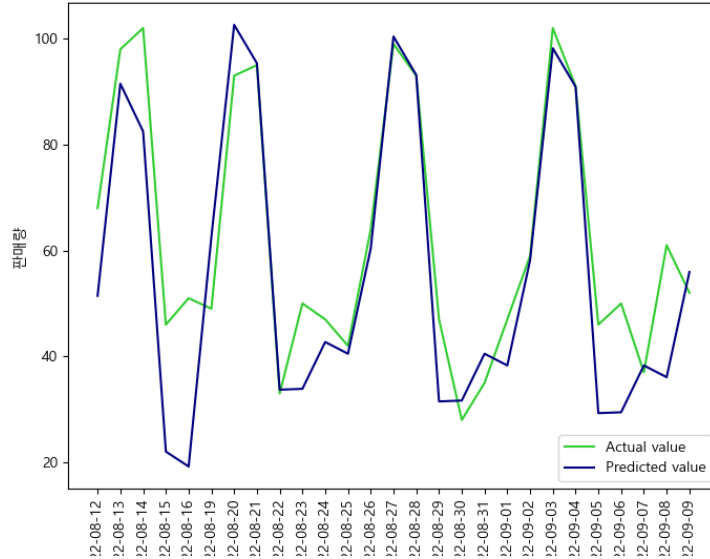


Innovine Studio – Retail industry, Daily Prediction, MAPE 0.94, R2 0.94

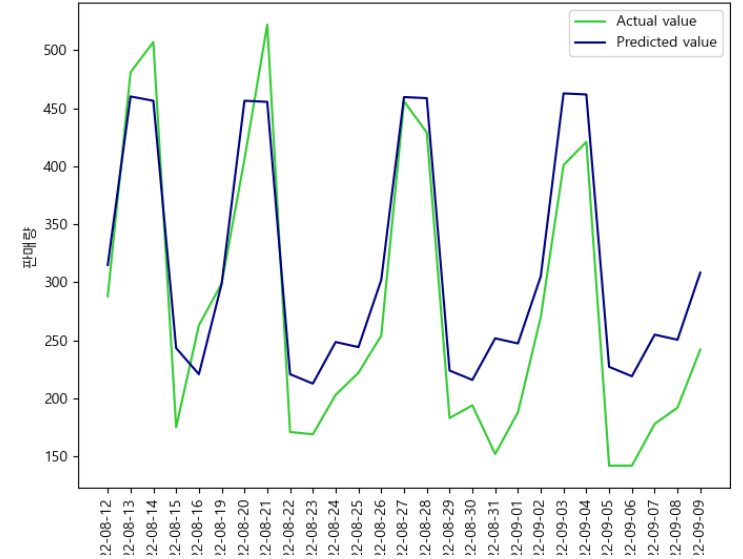
BSK-GRN-003['GIMMARI'] Pred-Actual Plot



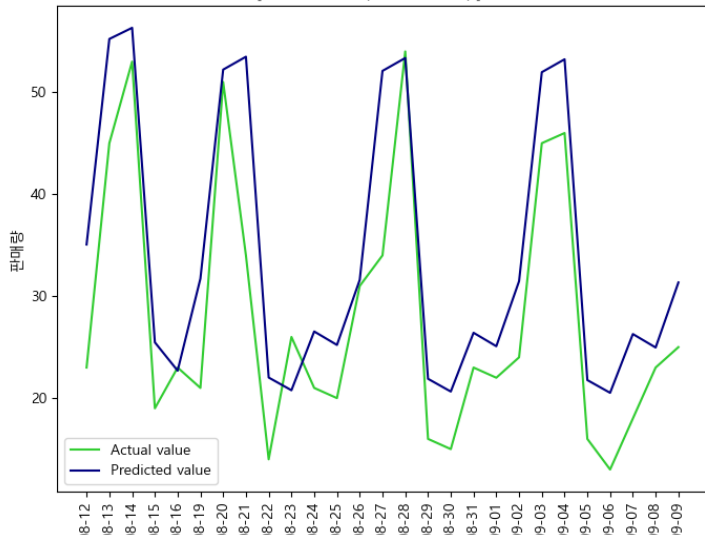
BSK-TPK-001['TOKPOKI'] Pred-Actual Plot



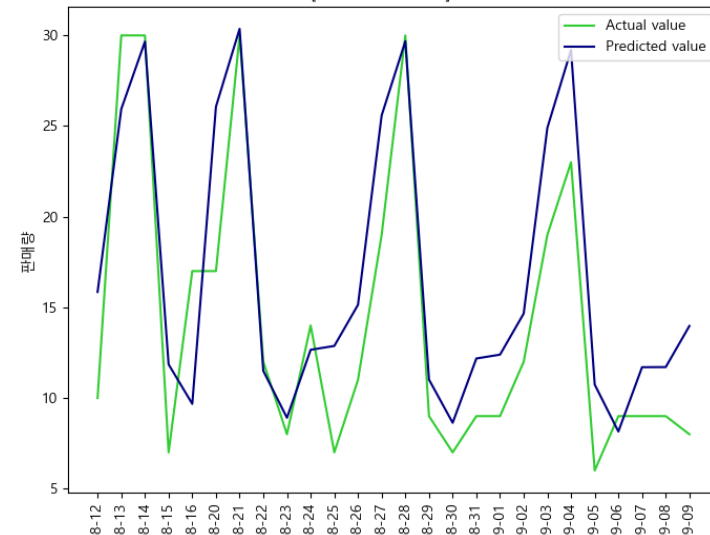
BSK-OMK-001['ODENG (ORIGINAL)'] Pred-Actual Plot



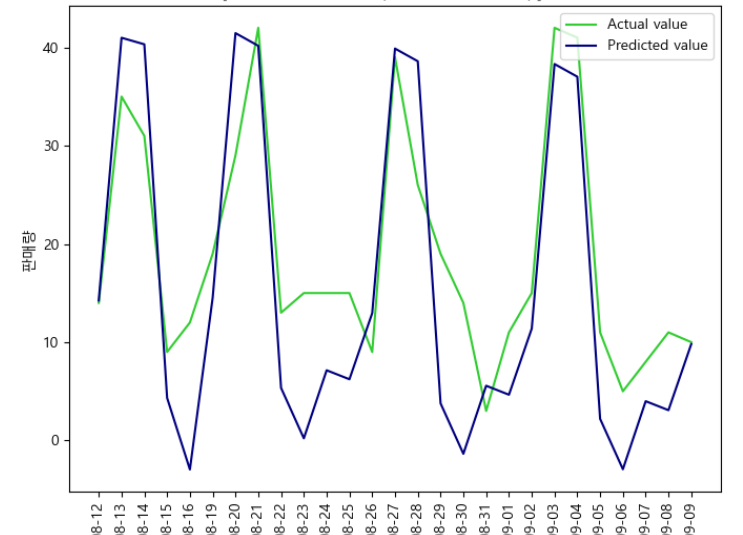
BSK-CDG-002['CORN DOG (HALF&HALF)'] Pred-Actual Plot



BSK-GRN-004['CUMI GORENG'] Pred-Actual Plot

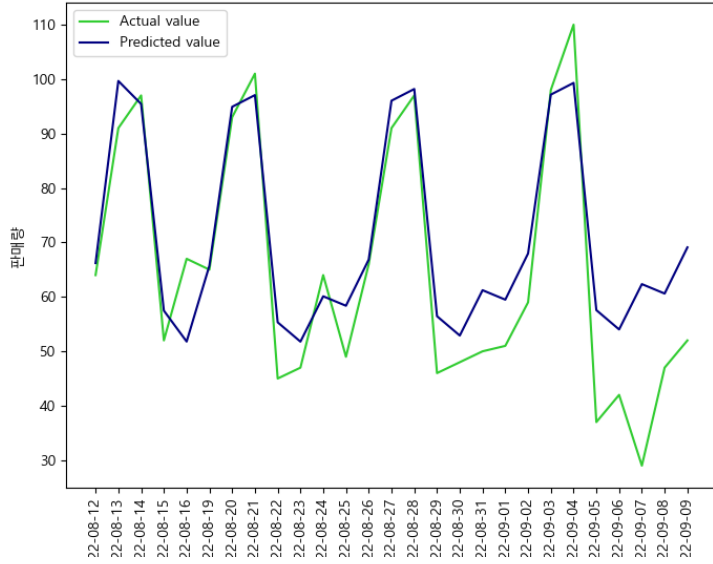


BSK-GRN-006['MANDU GORENG (FRIED DUMPLING)'] Pred-Actual Plot

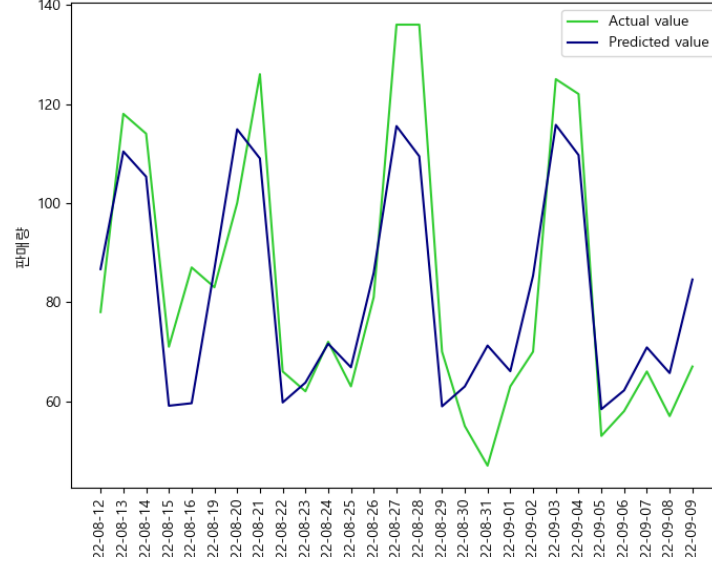


Innovine Studio – Retail industry, Daily Prediction, MAPE 0.94, R2 0.94

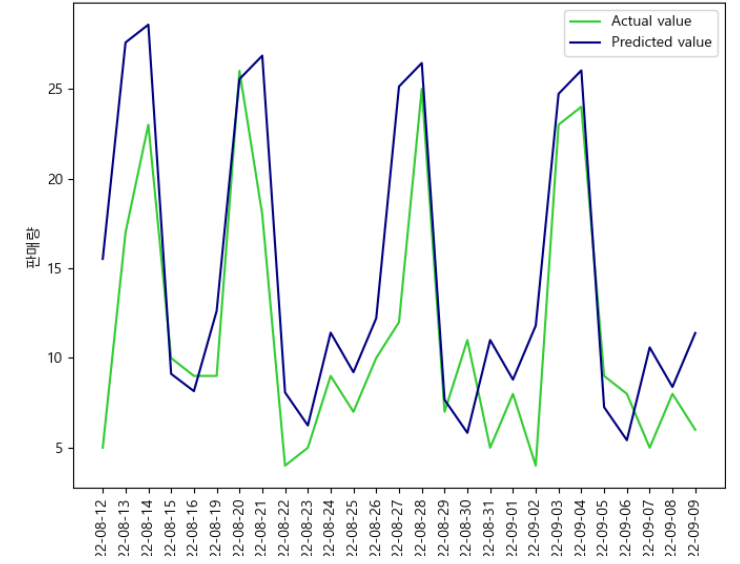
JSK-JJM-001['JJAJANGMYUN'] Pred-Actual Plot



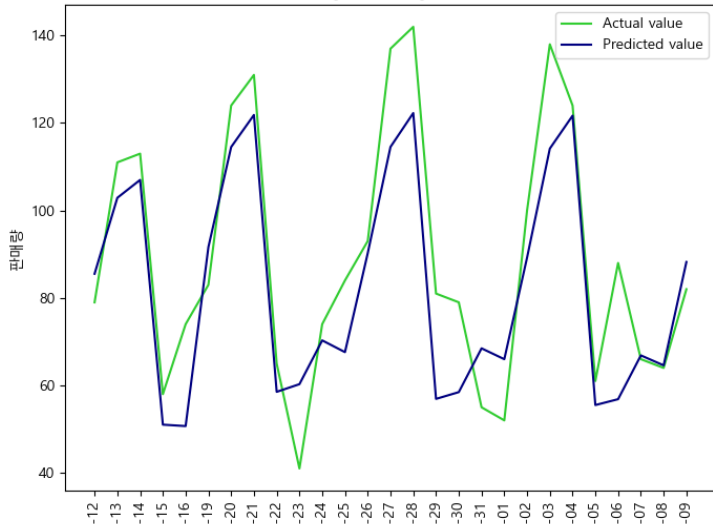
BSK-CHK-002['AYAM GORENG M (ORIGINAL)'] Pred-Actual Plot



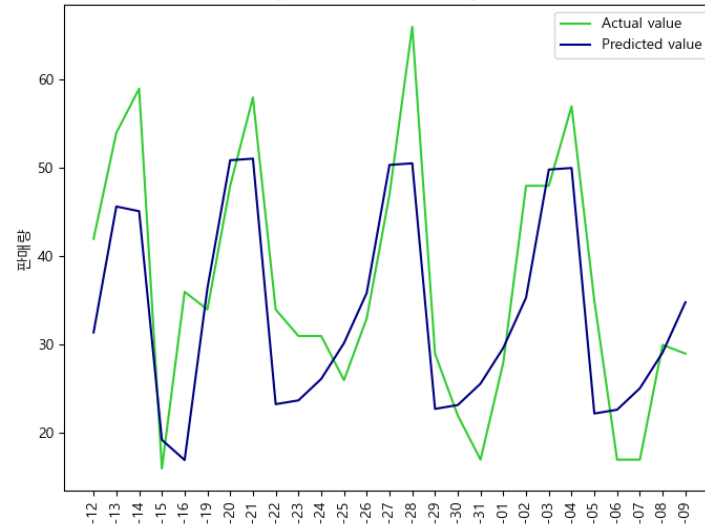
BSK-GRN-002['ODENG GORENG'] Pred-Actual Plot



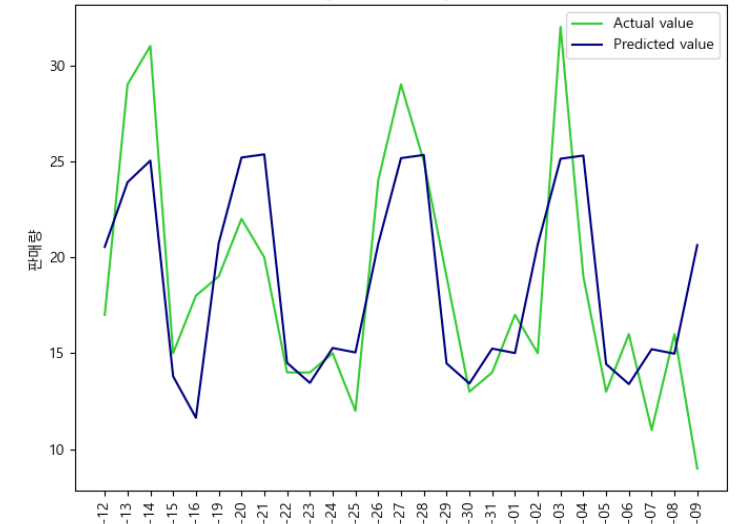
BSK-RMN-001['RAMYUN'] Pred-Actual Plot



BSK-KMB-002['KIMBAB (TUNA MAYO)'] Pred-Actual Plot

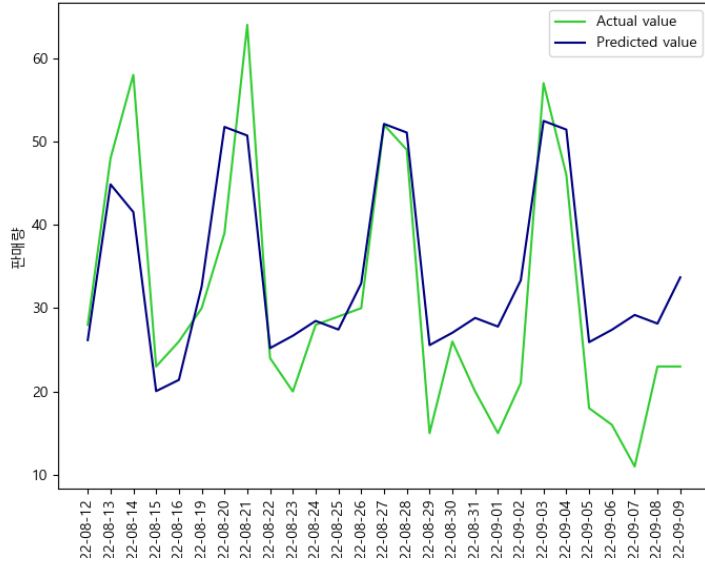


BSK-HBR-003['CHEESE BALL'] Pred-Actual Plot

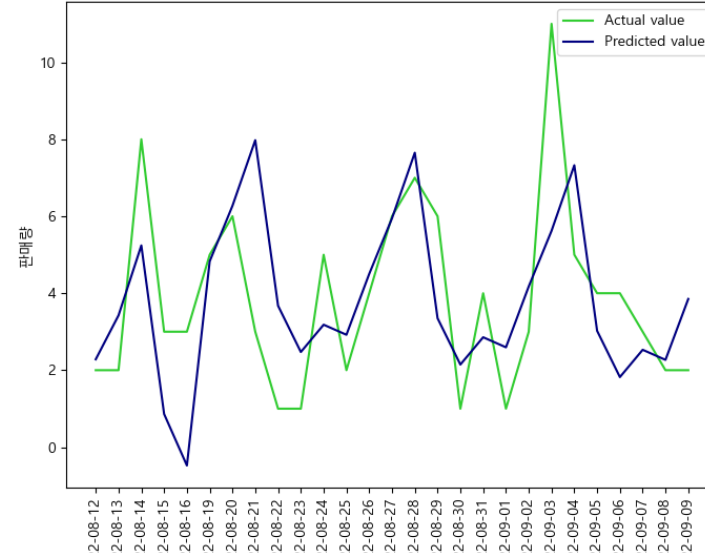


Innovine Studio – Retail industry, Daily Prediction, MAPE 0.94, R2 0.94

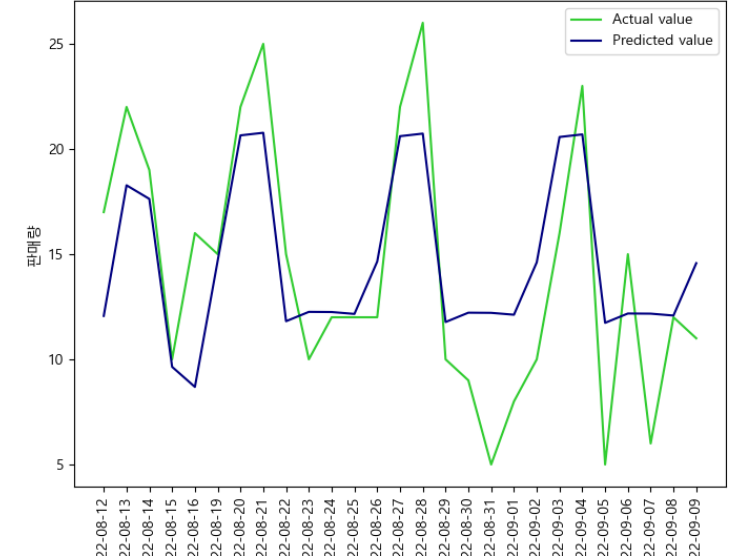
JSK-JSK-001['TANGSUYUK'] Pred-Actual Plot



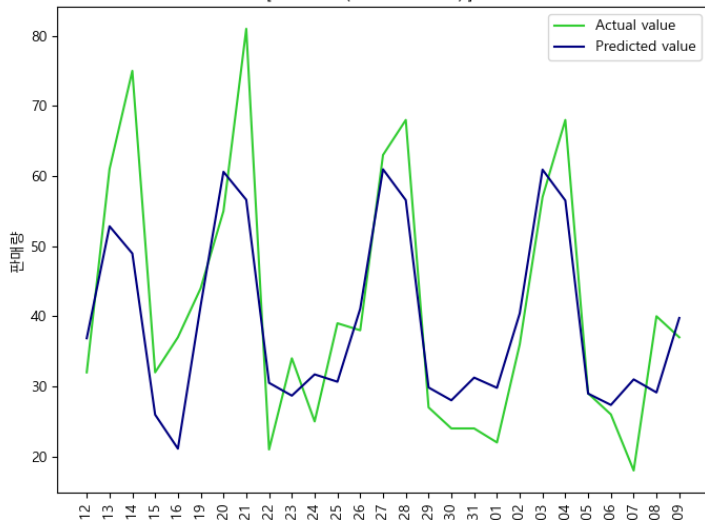
BSK-RMN-002['CHAPAGETTI (JJAJANG RAMYUN)'] Pred-Actual Plot



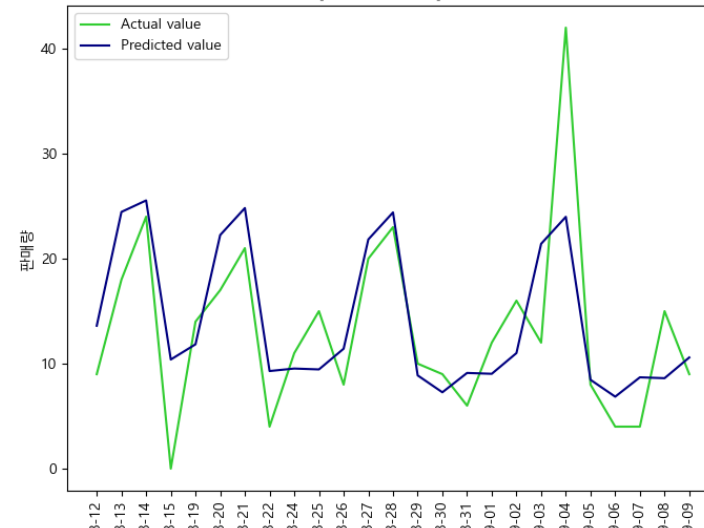
BSK-KMB-003['KIMBAB (CHEESE)'] Pred-Actual Plot



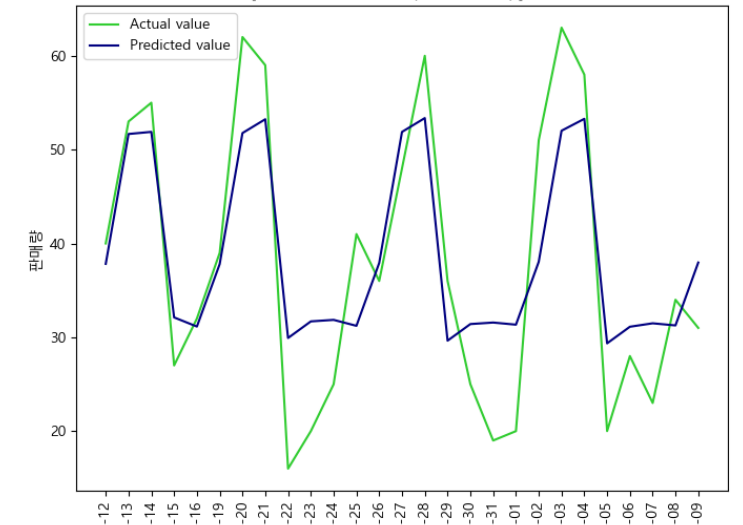
BSK-KMB-004['KIMBAB (DAGING SAPI)'] Pred-Actual Plot



BSK-GRN-005['UBI GORENG'] Pred-Actual Plot



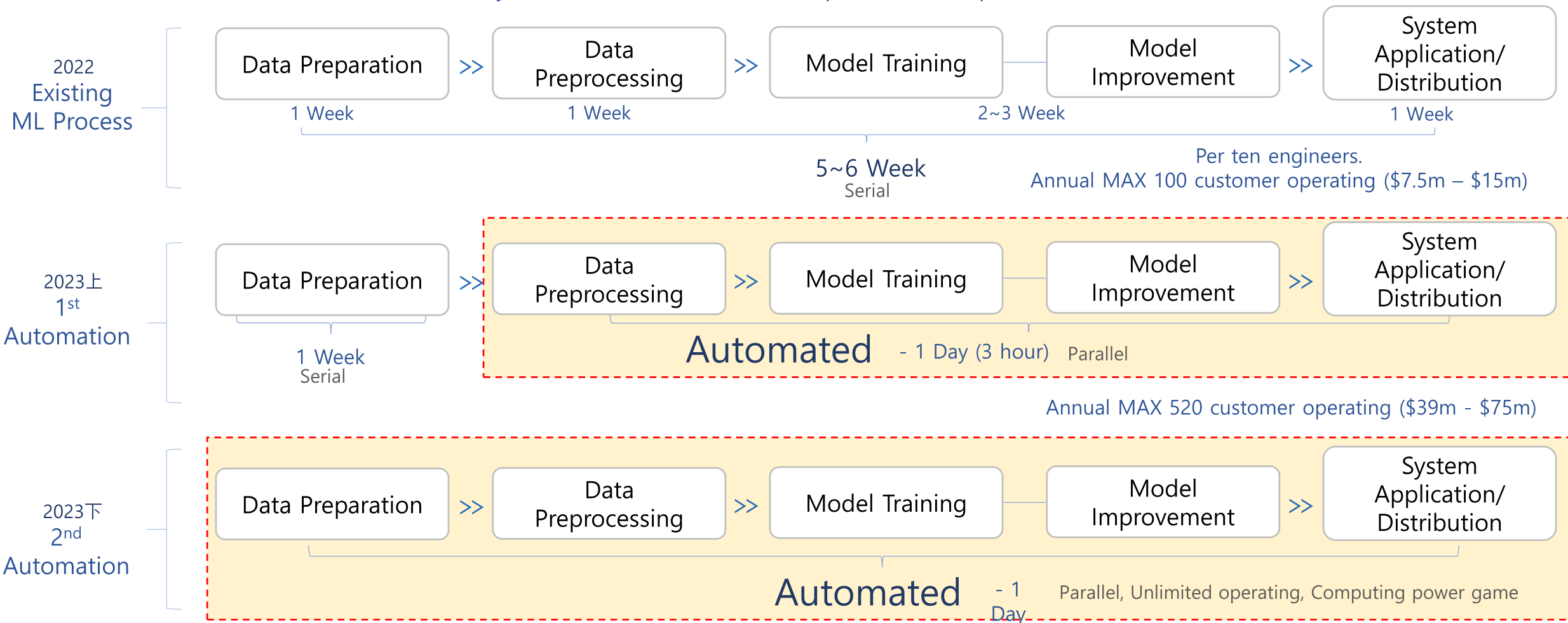
BSK-CHK-003['AYAM GORENG M (SOY SAUCE)'] Pred-Actual Plot



Competitiveness

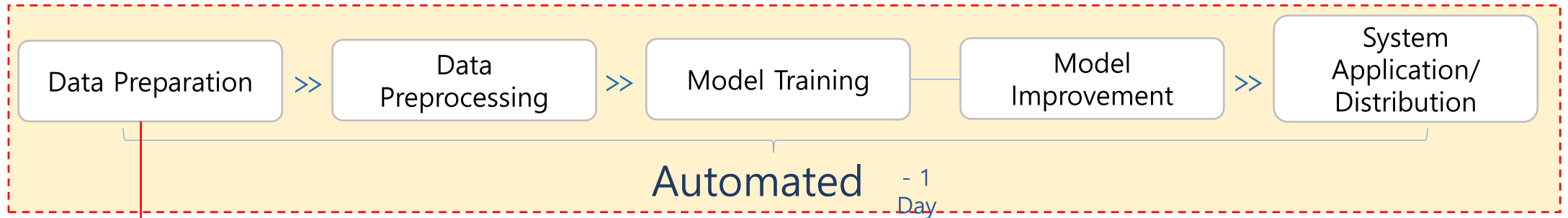
Automating the data pipeline operation

Procedures for driving AI prediction services, many of which are labor-intensive, repetitive, and capable of automation innovation



Competitiveness

Feature Engineering to Cover Diverse Industry Data [Inside-out, Outside-in Strategy]



Date	Product ID	Category	Price	Sales	Feature1	Feature2	Feature3
2022-01-03	XG004TY21	Lotion	1500	10	100ml	Blue	
2022-01-04	XG004TY29	Skin-Lotion	2500	24	50ml	Blue	
2022-01-05	YG005TY21	Lipstick	2500	3	100ml	Red	
2022-01-06	XG004TY25	Cleansing	1200	0	50ml	Yellow	
2022-01-07	XG005TY31	Cleansing	1200	17	100ml	Red	

Inside-out Strategy

- Although each industry and company are different in data, the types are similar
- Those companies that sell products have common feature type. {data, Product ID, Category, Price, Volume, etc.}
- It is required to match feature set types for the AI learning environment, which are almost the same regardless of industry.
- In addition to those core features, DeepFlow automatically creates environmental features, derivative features, etc., and extends them to 20 to 60 features.

Outside-In Strategy

- Identifying domain features is also important for better predicting specific industries.
- Efficient feature engineering by discovering domain features for each industry and applying them to all companies in the industry.
- Pre-trained model of industry units will be a significant material for business forecasting in the industry.

🔗 Current status of intellectual property rights 🔗

NO.	Applicant	Applied Country	Progress	Application and registration number	Name of intellectual property rights	Remark
1	Impactive AI	South Korea	Applied	10-2022-0078127	Methods and devices for generating predictive models	Patent
2	Impactive AI	South Korea	Applied	10-2022-0078128	Methods and devices for the development of predictive new products	Patent
3	Impactive AI	South Korea	Applied	10-2022-0099342	AI stacking ensemble prediction model	Patent
4	Impactive AI	South Korea	Applied	10-2022-0113420	Methods, programs, and devices for the development of new products based on AI	Patent
5	Impactive AI	South Korea	Applied	10-2022-0116942	Methods and systems for predicting entrepreneurial innovation using machine learning	Patent
6	Impactive AI	South Korea	Applied	10-2022-0135963	Methods predicting sales of new products using hybrid models based on ML	Patent
7	Impactive AI	South Korea	Applied	10-2022-0135964	Devices for building hybrid ML model to advance demand predictions for new products	Patent
8	Impactive AI	South Korea	Applied	10-2022-0143565	Machine learning prediction model for the intention to accept Robo Advisor	Patent
9	Impactive AI	South Korea	Applied	10-2022-0164818	Machine learning based demand prediction model and program	Patent
10	Impactive AI	South Korea	Applied	10-2022-0165017	Artificial Intelligent based demand prediction model and program	Patent
11	Impactive AI	South Korea	Applied	10-2023-0045124	Machine learning based demand prediction model and program	Patent
12	Impactive AI	International	Applied	PCT/KR2023/004811	Methods and devices for the development of predictive new products	Patent
13	Impactive AI	South Korea	Applied	40-2022-0204135	Deep Flow trademark	Trademark
14	Impactive AI	South Korea	Applied	40-2022-0204136	Deep Flow trademark	Trademark
15	Impactive AI	South Korea	Applied	40-2022-0204137	Deep Flow trademark	Trademark

3. REFERENCES

Applied cases



Deduction of the direction of LG Pra.L medical device and product transformation using deep flow technology

(Exclusive presentation to former Chairman)



Use of Impactive AI prediction technology, prediction of drug defect rate and yield, and development of defect cause detection model



AI based digital transformation strategy establishment consulting for strengthening future competitiveness

Strategy to strengthen Hyundai Motor Company's competitiveness using AI prediction



Supply of Deep Flow prediction system to Vietnamese clothing company

(Reduction of inventory shortage by 80% by the ability to predict product sales and inventory)



Supply of deep flow prediction system in Indonesian food court business

(Operation of pre-preparation system by predicting daily orders by menu of food court)



No.1 domestic fragrance company, supply of 1,500 fragrance requirements and inventory prediction system

(Process of the order calculation work that takes 15 days every month in 7 minutes, improvement of 90% of accuracy over user work)

Applied cases

Seoul Flavor



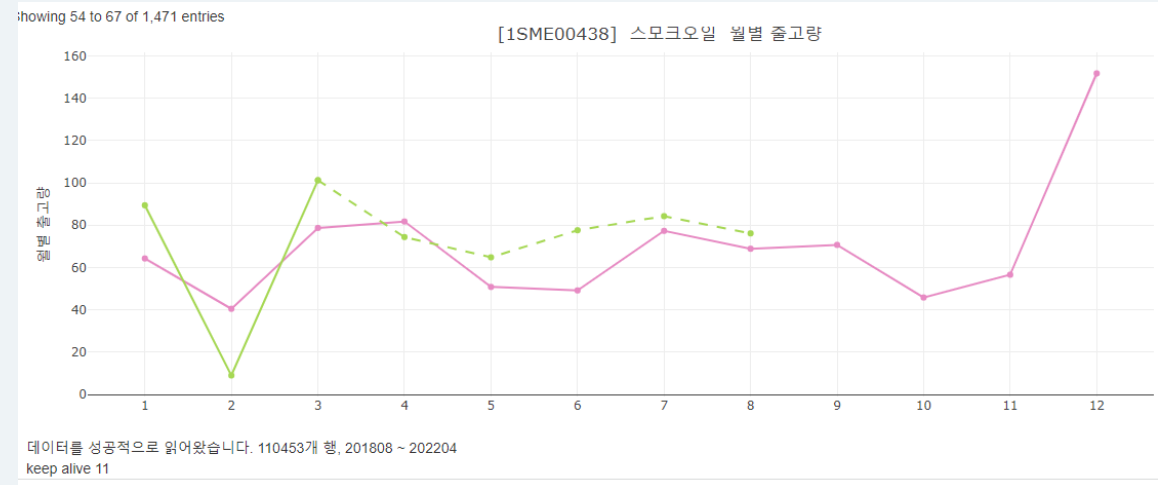
- **Motivation: Procurement of 1500 flavors per month, which was inaccurate and took 15 days per month(180 days per year)**
- Effect1: Work efficiency improved dramatically by automatically generating a draft order in 7 minutes instead of 15 days per month.
- Effect2: The prediction model is better than the user in all indicators in monthly comparison (error rate improved by 70~80%)
- Effect3: The model's prediction accuracy increases upward every month, creating a virtuous cycle of performance improvement over time.

서울향료 출고량 예측 시스템

공정선역: 1공장 | 내외차구분: 전체 | 대분류: 전체 | 중분류: 전체 | 소분류: 전체

기준개월: 4 | 기간내용: 1개월 | 작업내용: 1개월

가재치	종번	종명	예상 출고량	소요량	잔량	발주량	잔고	재고비율	재고 부족	재고부족	잔입	3개월 평균 잔입량	6개월 평균 잔입량	출고 평균	발주 수량	요청날	배고
1052	케이피한석유과	5S1008	PE용기(20KG)(정석용기)	47,000	0,000	130,000	0,000	130,000	2.6	0.000	58,000	47,000	22,667	22,667	true	58	2022-04-21
547	도타란	1SA4003651	Isopropyl Myristate	15,139	30,080	4,861	0,000	4,861	0.3	10.278	55,694	15,139	15,139	false	56	2022-04-21	
356	대불대이피엔에스	1SC002911	요거트파우더(대불대이피엔에스)	36,122	745,200	47,000	45,000	47,000	2.5	0.000	52,487	10,000	23,442	20,496	true	53	2022-04-21
647	동방푸드미스타	1SME00408	스모크오일	74,411	531,809	256,717	0,000	256,717	3.4	0.000	44,445	101,250	66,576	75,655	true	45	2022-12-21
1229	한성푸드영농조일업	1SC002402	유자과즙(한성푸드)유자오일에서분취(1...	15,198	202,126	14,039	0,000	14,039	0.9	1.159	41,332	0,780	5,551	12,010	true	42	2022-04-21
1470		1SME02139	파프리카주물엑스(두배,진한향미유용용료...	10,085	0,000	0,000	0,000	0,000	0.0	10,085	40,340	0,000	3,362	3,362	true	41	2022-04-21
827	에이원카트	1SMFD3542	자두씨고구마엑스 AF1	9,000	0,000	1,500	0,000	1,500	0.2	7,500	34,500	0,000	3,000	3,000	true	35	2022-04-21
646	통그린	1SC003010	ALPHONSO MANGO FLAVO...	8,868	0,000	2,474	0,000	2,474	0.3	6,394	32,996	0,000	0,000	0,000	false	33	2022-07-11
161	THASEGAW...	1ST036767	MANGO KEY BASE SKF-3...	7,667	0,000	0,295	0,000	0,295	0.0	7,372	30,372	0,000	0,000	0,000	false	31	2022-04-21
1446		1SC0003184	Vanillin Root SE FR...	7,560	0,288	0,000	0,000	0,000	0.0	7,560	30,240	0,000	0,000	0,000	false	31	2022-04-21
898	유엔아이	1SC003317	키오이달수출물 22008211	7,333	0,000	0,200	0,000	0,200	0.0	7,133	29,133	0,000	0,000	2,333	false	30	2022-07-11



Feedback

Seoul Flavor

“It’s a satisfactory result that the AI demand model system has reduced the department head’s work time meaningfully”

“Also I am looking forward to the increasing accuracy of the AI model’s predictions.”

“It is good that users can easily access and use the system, and that it is linked with ERP to intuitively check the demand situation.”

“It is good that users can easily access and use the system, and that it is linked with ERP to intuitively check the demand situation.”

리뷰세션

순서

(3) 시스템 및 모델 정확도에 대한 의견

<예측 모델 비교>

지표	예측모델	사용자	현업부계획	사용자대비 예측모델성능
RMSE	1056	1035	9467	89.78% 향상
MAE	198	2067	1638	90.42% 향상
R2	0.994	0.757	0.546	31.31% 향상
Cor	0.997	0.892	0.859	11.77% 향상
MAPE(1kg-출고량-0kg)	318%	854%	710%	392%p 향상
MAPE(100kg-출고량-1kg)	37.30%	336%	313%	276%p 향상
MAPE(출고량>100kg)	16.20%	135%	149%	133%p 향상

리뷰세션

순서

(2) 사용자 현업 적용 상황에 대한 의견

- 그래프와 향후 소요량에 대해 보여주는 방식의 유용성
- 사용자의 작업 속도의 개선 여부
- 업무 프로세스상 상호작용의 변화



Applied cases

LimeOrange



- **Motivation:** Fashion apparel business in Vietnam, flexible product sales/management with trend changes
- **Step 1, Build a demand forecasting inventory management system, Step 2, Build a demand forecasting system for new products in advance, of which Step 1 was built first**
- Effect 1: Significant improvement in demand forecasting accuracy
- Effect 2: Improved user-friendly UI
- Effect 3: Proactive response process by identifying sales trends by item in advance

The screenshot displays the 'Deep Flow' dashboard with a sidebar menu and a main content area. The sidebar includes sections for Forecast, Design, and Management. The main content area is titled '수요예측' (Demand Forecast) and shows a table of items with columns for ID, Status, Category, Name, Color, Gender, and Size. Below the table, there is a product image of a pink jacket, a line chart showing demand trends over time, and a summary table with sales data.

ID	Status	Category1	Category2	Category3	Name	Color	Gender	Size
RM22737402-GR-XL	✓	ÁO KHOÁC	(None)	(None)	Áo Khoác Dù Nam Trượt N...	GR	Male	XL
RO22737402-LGR-L	✓	ÁO KHOÁC	(None)	(None)	Áo Khoác Dù Nữ Trượt N...	LGR	Female	L
RO22737402-LP-L	✓	ÁO KHOÁC	(None)	(None)	Áo Khoác Dù Nữ Trượt N...	LP	Female	L
RO22737404-P-S	✓	ÁO KHOÁC	(None)	(None)	Áo Khoác Dù Nữ Trượt N...	P	Female	S

	2023 01/23	2023 01/30	2023 02/06	2023 02/13	2023 02/20	2023 02/27
실제판매량	18	12	14	8	3	8
판매가(평균)	\$599,000	\$599,000	\$599,000	\$599,000	\$599,000	\$599,000
매출	\$10,782,000	\$7,168,000	\$8,386,000	\$4,792,000	\$1,797,000	\$4,792,000



Feedback



LimeOrange

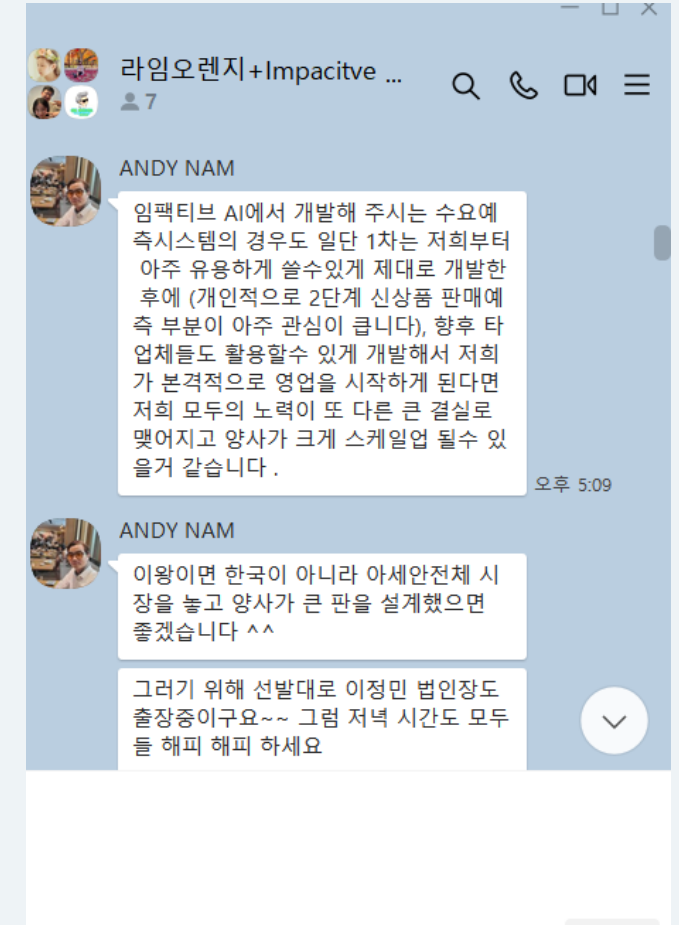


“I think you could make an AI project that you can proudly showcase in the future.”

“It must have been difficult to implement a demand forecasting model and system to be used in an unfamiliar fashion domain, but it was good to see traces of a lot of thought and effort.”

“In the case of the demand forecasting system developed by Impactful AI, we have been able to use it very well for the first time, and I am personally very interested in the second stage of new product sales forecasting (follow-up solution supply)”

“If we develop it so that other companies can utilize it in the future and we start sales in earnest, I think our efforts will bear another great fruit and both companies will be able to scale up significantly.”





Initial market coverage



Manufacturing



- **Companies with more than 100b won in revenue.**
- **14,552 in total**
- **1k new startups per year**

Retail



- **Companies with more than 50b won in revenue**
- **18,859 In total**
- **2k new startups per year**

- The target is the companies with more than 100b won in sales in manufacturing and 50b won in sales in retail.
- A total of 33,400 companies, with 3,000 new companies starting up every year.
- Effective sales pool (30%) of 2 trillion won, of which more than 10% is expected to be the target pool.
- Other industries than manufacturing and retail & global industry are possible market



Thank You

