Masters in Data Science program

"To fulfill my goal of becoming a global solution provider"

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CONTENTS

My approach & Understanding

To be CLEAR… Self Introduction (Personal)

✓ **Understand how to collaborate and share things with each other than staying in individual happiness Experience the level of creativity allowed in Canada, I had a dream of going abroad, on a bigger stage.**

✓ Have been grateful and satisfied with all the things given to me - a stable family, faith and love, and financial leisure that does not overflow. If I hadn't practiced sharing, such as IT Volunteer work in Ecuador and supporting students in Zimbabwe, I might have lived a very personal life. However, through such a precious experience, I hoped for a shared future rather than staying in individual happiness.

✓ When I was in Canada, I saw firsthand the degree of diversity accepted and appreciated in Canada and the level of creativity allowed. I was moved by the possibilities that an open society can bring to its members. Since then, I had a dream of going abroad, on a bigger stage. To this end, I made endless efforts, such as a Master degree program and studying English, and came to Oracle, which would become a stepping stone to my future dream. At Oracle, I had a lot of experience, such as carrying out overseas projects with global experts.

✓ Now is the time to take the next step toward my dream. My next destination is Rutgers, and I want to work at a global tech company for 3 years, understand the flow of the US and global markets, and start my own business in 5 years.
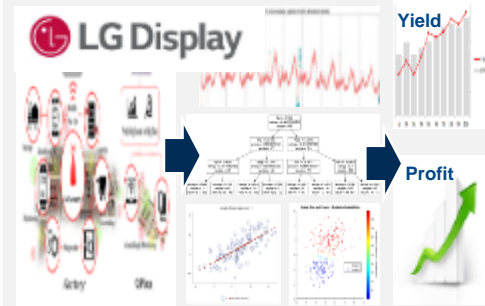
To be CLEAR… Self Introduction (Professional)

✓ **Ready to share my experiences in the field of data science, and be confident to create synergy in research activities and collaborate with colleagues at the State University of New Jersey, Rutgers**

My expertise in Data Science field and my enthusiasm for learning
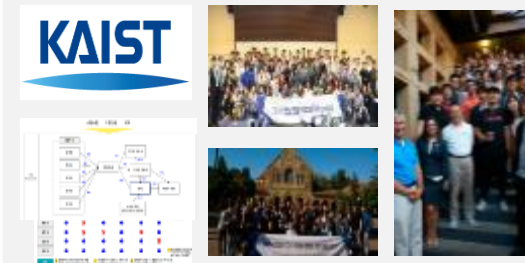
• Data Scientist (LG Display) ('13.01~'19.05)	• KAIST Master of Science in Information Management ('16.09~'19.01)	• AI/ML & Data platform Consultant (Oracle) ('19.05~present)	• Enthusiasm for learning (~Continuous)

" Provide business value by analyzing data and developing models so as to excavate insights for the front-line employees "

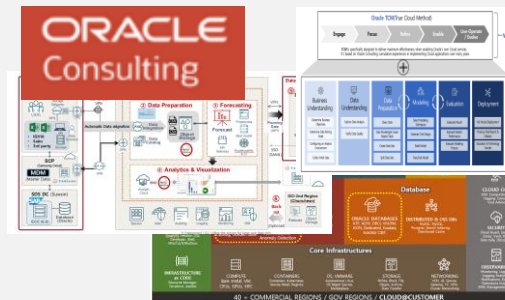**" An interdisciplinary program that combines data analysis, strategy, and management (Lectures: Business Analytics, Big data Analysis, App development, IT system Design, IT business Management) "**

" Provide consulting services to design data architecture and develop AI/ML & Data platform to build data-driven enterprise "

" Externally activities to improve my technical knowledge in Data Science and academic subjects"

• **Implement multiple ML/data analysis projects**
→ Develop an anomaly detection model and monitoring system with ANN algorism, enabling early error detection of pixel deposition facilities. (Reduced annual defect rate by 0.2%)
▶ Python, SAS(JMP), Spotfire, Matlab, Excel,

• **Research:** Expected Values on the Continuous Intention to Use IoT Products from the Perspective of Expectation-Confirmation Theory (user, survey data)
• **Data analysis & ML Projects** with startup companies (Recommendation system, churn &conversion rate, target marketing, and log data analysis)
▶ Python, SPSS, Smart PLS, Mysql, OracleDB

• **Implemented multiple AI/ML & data platform projects** (Industry: pharmaceutical, distribution, manufacturing, insurance, banking)
• **Engage in proof-of-concept work or product demonstration** for clients to deliver data strategy and insight based on clients' requirements.
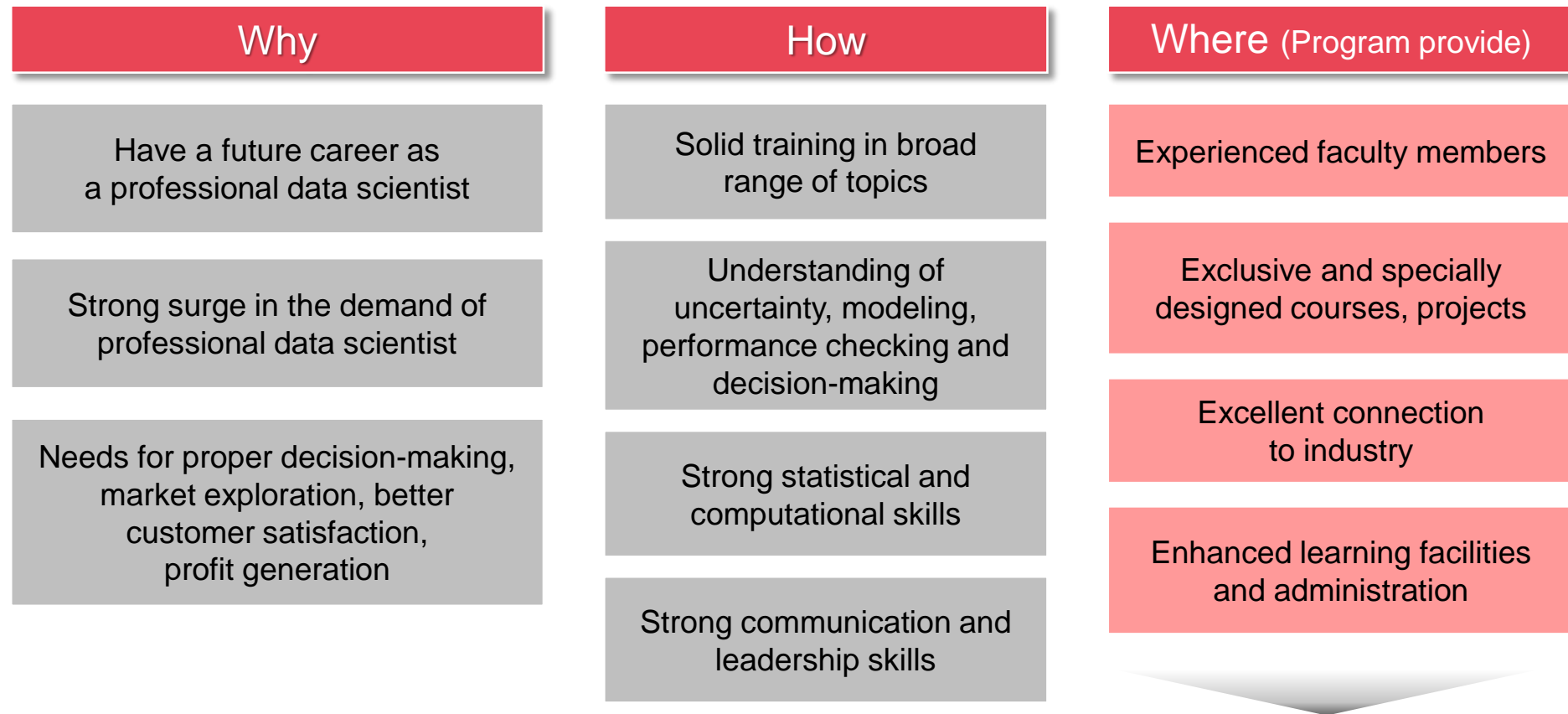▶ Python, Oracle solution (OML, OAC, Data Science, AI Service)

• **External efforts:**
Oracle professional training (Analytics, Database, Cloud Infrastructure, Architecture)
Courses (Linear Algebra, Multivariate Calculus, Statistical Inference, Randomized Algorithms, Data Structure)
Conference & Volunteer work (KORMS conference, NVIDIA GTC 2018, IT Education volunteer(Ecuador))

To be CLEAR… My understanding of Masters in Data Science program at Rutgers

✓ **Rutgers' Masters in Data Science program was designed with solid training in a broad range of topics from coursework, research project, and internship in order to train skilled Data Scientists**

Rutgers' Masters in Data Science Program overview

Why	How	Where (Program provide)
Have a future career as a professional data scientist	Solid training in broad range of topics	Experienced faculty members
Strong surge in the demand of professional data scientist	Understanding of uncertainty, modeling, performance checking and decision-making	Exclusive and specially designed courses, projects
Needs for proper decision-making, market exploration, better customer satisfaction, profit generation	Strong statistical and computational skills	Excellent connection to industry
	Strong communication and leadership skills	Enhanced learning facilities and administration

Goal: " **Boost knowledge of how to apply these skills to real-world problems** "

To be CLEAR… Why Rutgers' Masters in Data Science program ? (My progress)

✓ **Having a master's degree from Rutgers University which is the best Data Science program across the globe is a prerequisite for my future objective to start my own business.**

✓ In 2019, I decided to pursue my journey at Oracle in order to aid in preliminary work for companies in a variety of industries seeking to start data transformation. Oracle allows me to develop into a better-equipped analyst and entrepreneur. I'm able to understand different market demands by facing unmet needs by serving consulting services to multiple clients in a diversity of industries. I plan to develop my own solution for the existing numerous Small and Midsize Businesses (SMB) each with its unique set of needs. With the lessons from my career and degree program, I aspire to develop the AI/ML-based solution package that will help SMBs in their operations across the world.

✓ Having a master's degree from Rutgers which is the best Data Science program across the globe is a prerequisite for my future objective to start my own business. I will make my partners and, expand my technical and theoretical knowledge. Also, I will have time to quench my thirst by reading and understanding various research papers and finding things that can be applied. Moreover, I will work on a research project within my interest to deepen my knowledge. I'm certain that I will be able to accomplish my goals and create meaningful results by partaking in the Masters in Data Science program at Rutgers.

To be CLEAR… My course schedule at Rutgers University

✓ **Quench my thirst through required and elective courses (In particular★) to fulfill my future objective**
Plan to take 3 semesters (30 credits): Required (24), Electives (6), Internship (-), and research project (3)

	Year 1			Year 2
Calendar	Fall (Sep- Dec)	Spring (Feb - May)	Summer (Jun - Aug)	Fall (Sep - Dec)
Credit	12 credits	12 credits	-	6 credits
1	Probability and Statistical Inference for Data Science	Data Wrangling and Husbandry	Internship	Statistical Learning for Data Science ★
2	Regression and Time Series Analysis for Data Science ★	Database Management Systems		Independent Study (Research project)
3	Introduction to Data Structures and Algorithms ★	Statistical Models and Computing ★		
4	Advanced Analytics using Statistical Software ★	Financial Data Mining ★		

★Important courses for me to enhance my knowledge are needed

Curriculum	
Seminar or Workshop	1 written report among four of the seminars
Practical training course (Intern or Coop)	Off-campus Internship (*might have 3 credits for electives)
	➕
Electives	2 courses (6 credits)
	➕
Required Courses	8 courses (24 credits)
Total	30 credits

※ Total of 30 credits are required for graduation.

To be CLEAR… My area of interest

✓ **Would like to work on developing methods to promote the use of data science, especially with regard to demand forecasting, Market prediction, and decision-making under uncertainty**

My interest in Data Science

✓ Recommendation model
✓ **Time-series analysis**
✓ **Sales & demand forecasting**
✓ Customer segmentation
✓ **Market Prediction**
✓ Customer satisfaction prediction
✓ Social media analysis

Deepen my knowledge at Rutgers

✓ Explainable recommendation
✓ Graph-based recommendation
✓ Sentiment-based recommendation
✓ Media (cartoon, music, book) recommendation
✓ Fake review detection

✓ High-dimensional Time-series analysis
✓ **Forecasting for new launching products (Without historical data)**
✓ **Development of key factors for certain market events**
✓ Customer Personalization Services
✓ **Continuous decision-making under uncertainty**

To be CLEAR… Why Rutgers' Masters in Data Science program ? (My direction of study)

✓ **Impressed by Harry Crane's research, I would like to work with him on the key factors that affect certain market events and predict the demand for products entering new markets in complex market dynamics**

| Based On Experiences | | Desire to work with faculty at Rutgers |

Description

LG Display
Data Scientist

" Sharpened my skillset in Data Science filed "
- Validate factors by using statistical methods
- **Development of prediction model and monitoring system**
- Opportunity to analyze big data

KAIST
MS in Information Management

" Broaden my standpoints in Data Science filed "
- **Work with various industry startup companies**
- **Experience multiple types of data, recommendation system**
- **Publish research paper (User expectation, Continuous use)**
- Understand Data-driven strategy

Oracle
AI/ML Data platform consultant

"Apply to real cases & Experience end-to-end service"
- Provide data management strategy for clients
- **Implement AI/ML, data platform consulting projects (Market Basket Analysis, Forecasting system, and etc.)**
- Understand architecture with Oracle's strong data product lineup

External efforts
course, training

" Enhance academic & technical knowledge "
- **Attend several mathematical and data coursework**
- Take professional training courses and earn certificates
- Attend academic & Global AI conference

Harry Crane

Market efficiency and price discovery
→ Design prediction markets. They are useful for aggregating information and representing future uncertainty by a meaningful quantity in the present

Data analysis in complex market dynamics
→ Study the limitations of traditional statistical methods for modeling complex data and develops new approaches in those situations.

" Define key factors and predict demand for products entering new markets in complex market dynamics "
→ I would like to research to develop key factors that affect certain market events and predict the demand for products entering new markets in complex market dynamics.

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