2020 Fall: Business Analytics (ITS504)

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School of Industrial Management Engineering

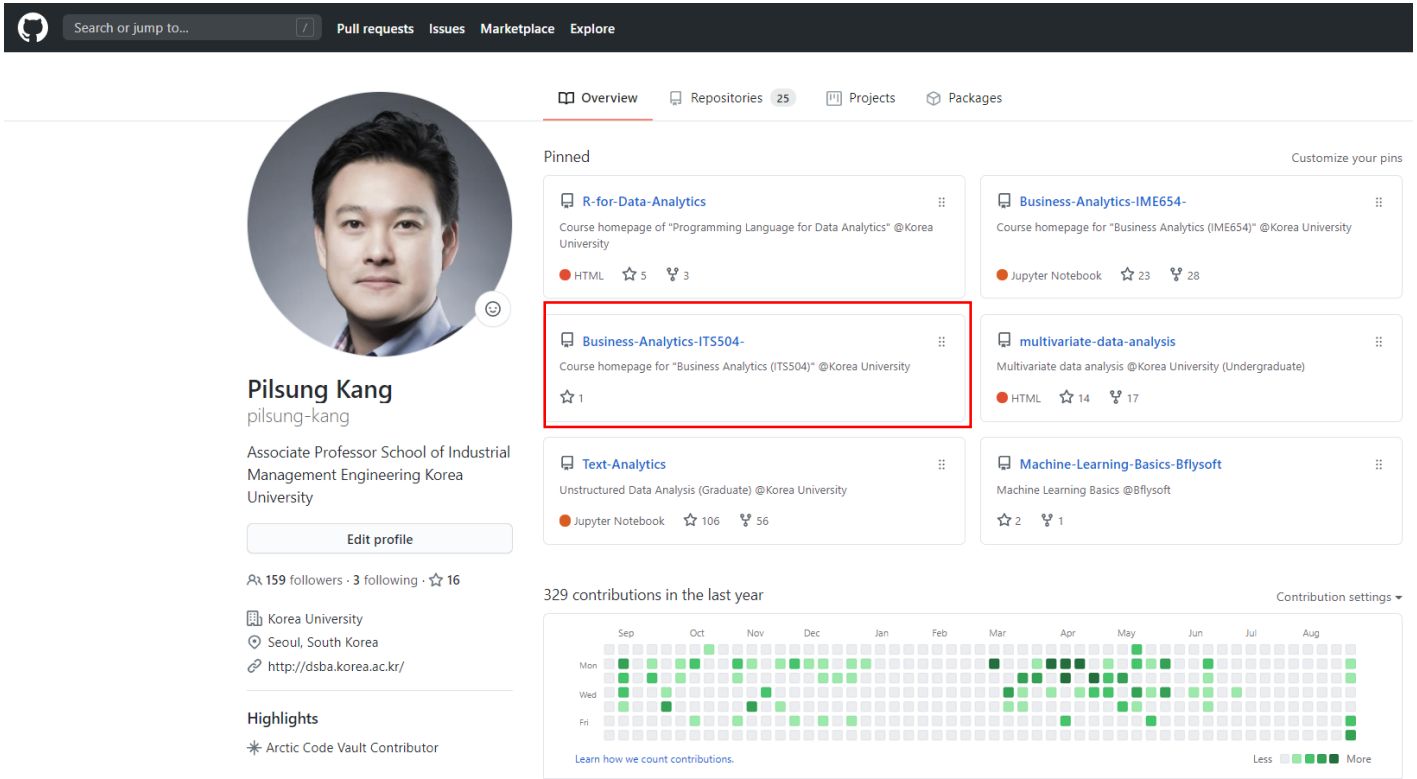
Korea University

Overview

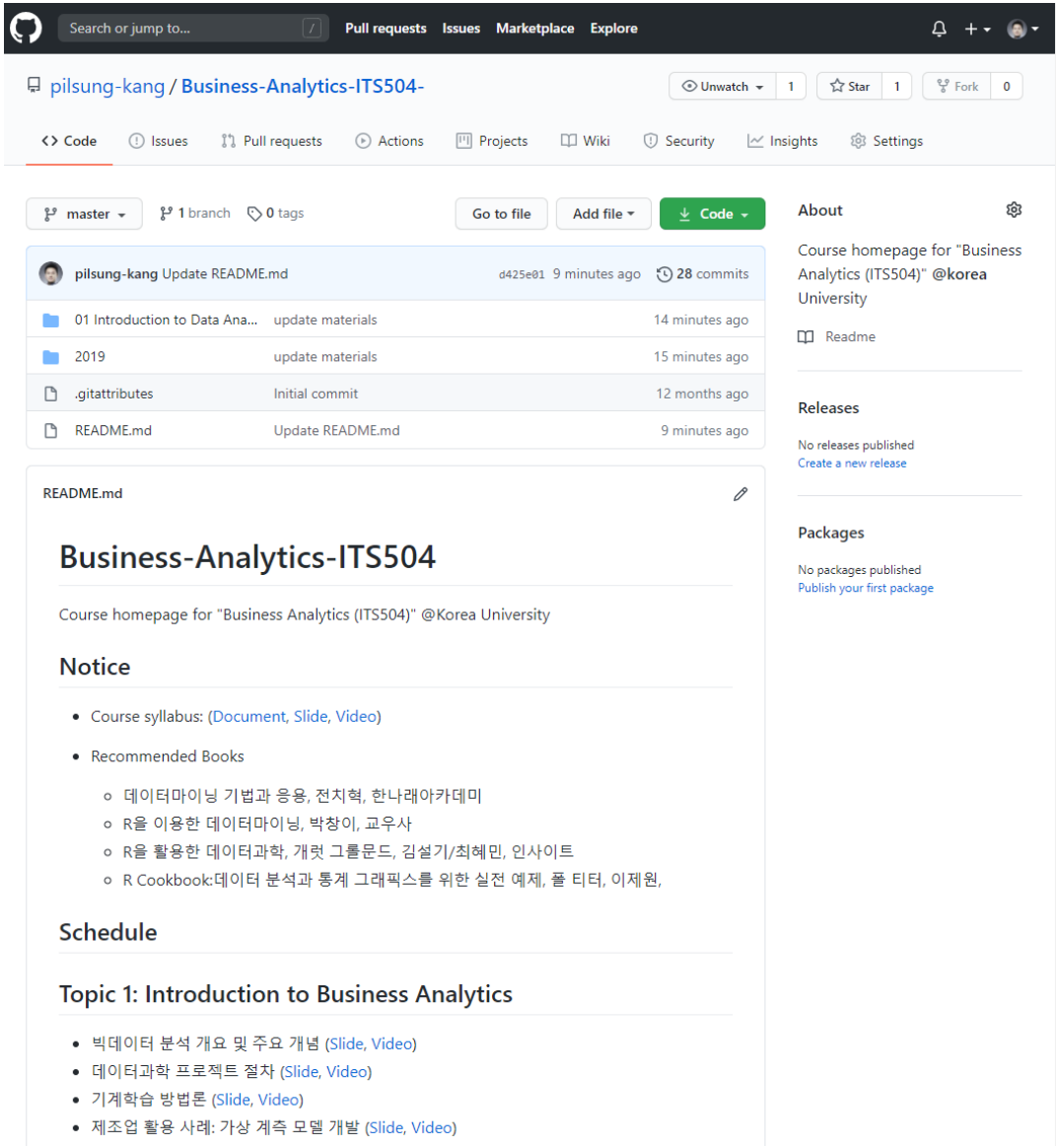
- Course Description
  - ✓ This module aims to provide students with the theoretical and practical knowledge and skills to obtain, modify, and analyze a large amount of data from various sources
  - ✓ Topics covered in this module include basic association rules, supervised learning algorithms (classification & regression) such as linear/logistic regression, decision tree, artificial neural networks, and unsupervised learning algorithms (clustering) such as K-Means clustering and hierarchical clustering
  - ✓ This module comprises lectures and lab exercises with R (optional) to develop the practical skills

Lecturer & Course Homepage

- Pilsung Kang, Associate professor at School of Industrial Management Engineering, Korea University
  - ✓ E-mail: pilsung_kang@korea.ac.kr
  - ✓ Course homepage: https://github.com/pilsung-kang/Business-Analytics-ITS504-

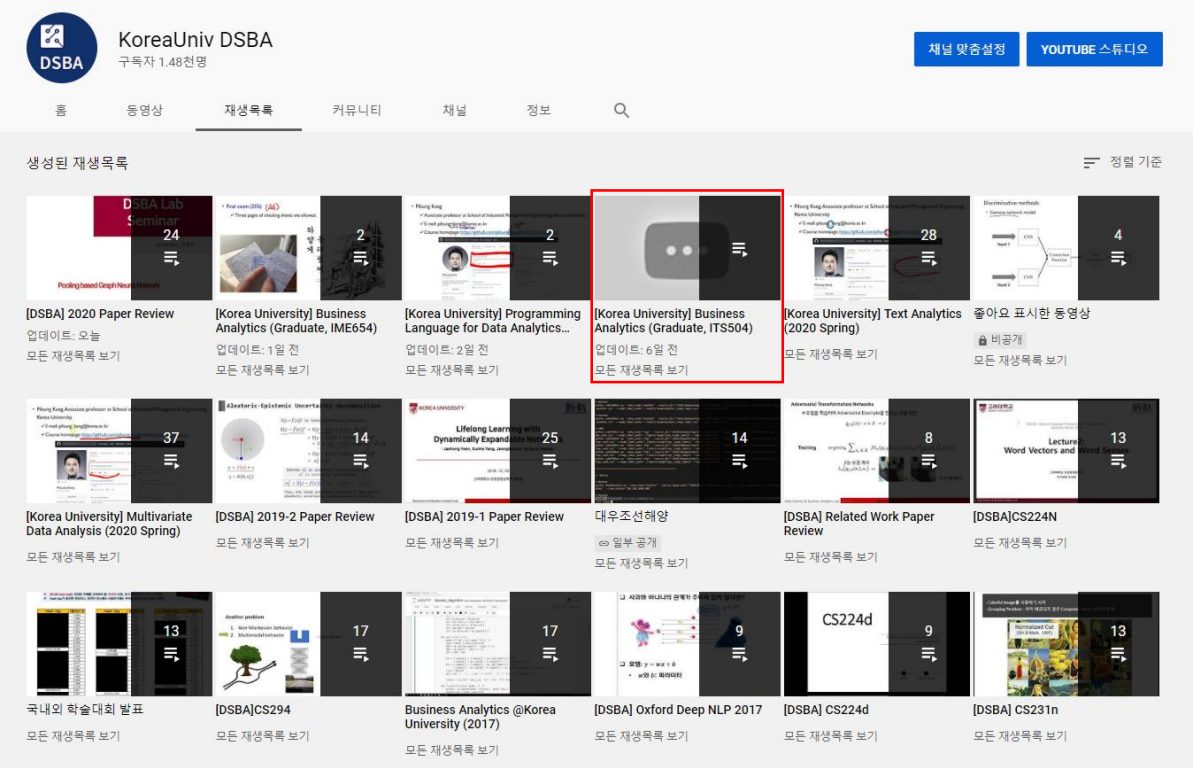


Lecturer & Course Homepage



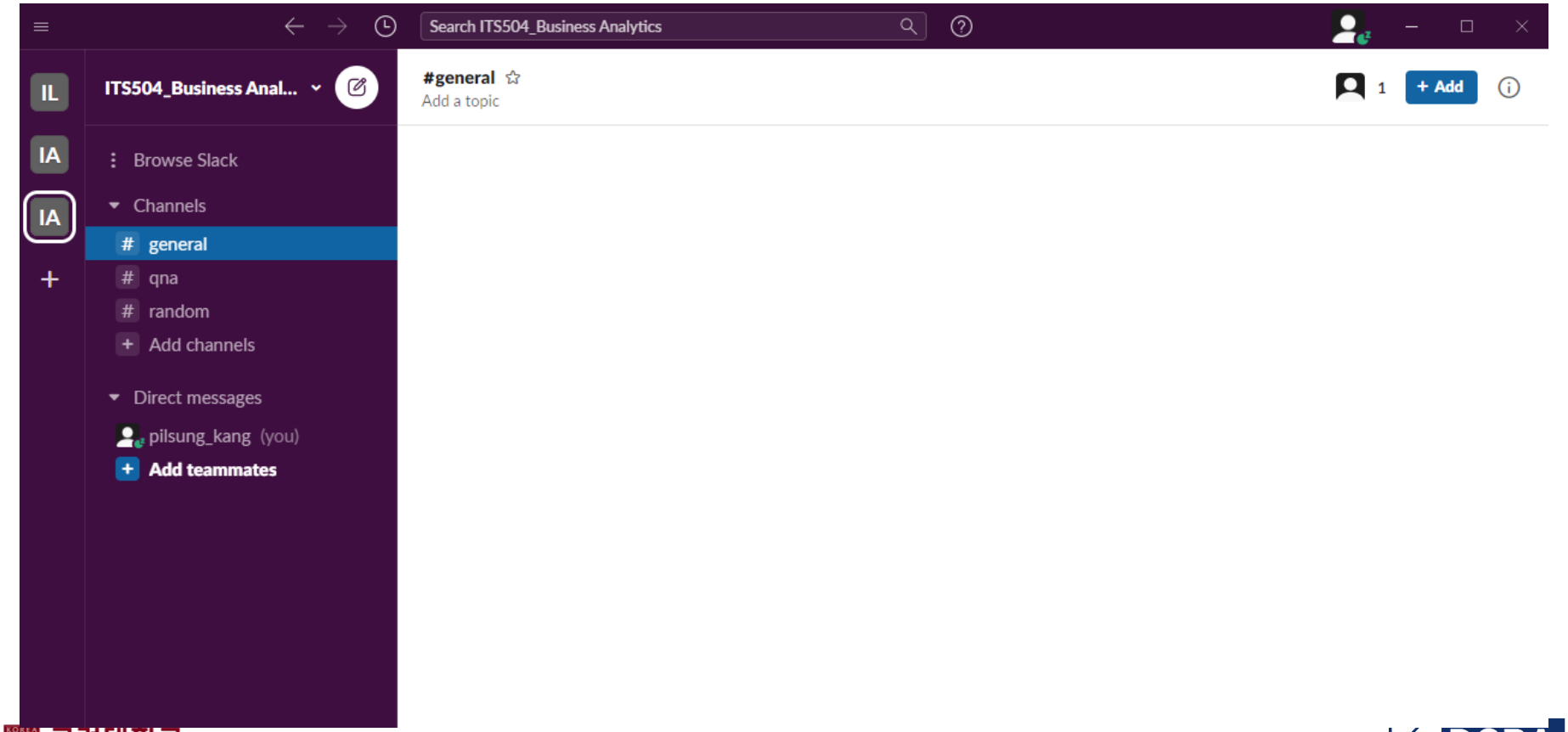
Lecture Video

- DSBA Lab Youtube Channel
  - ✓ https://www.youtube.com/channel/UCPq01cgCcEwhXl7BvcwIQyg
- Playlist for this course
  - ✓ https://www.youtube.com/playlist?list=PLetSlH8YjIfXMOuS4piqzJRvSZorDnNUm&playnext=1&index=1



Communication Channel

- Slack will be used for real-time communication channel
  - ✓ ime504-koreauniv.slack.com
  - ✓ The invitation link will be sent to the enrolled students via e-mail



Lecture Modules & Self-Introduction

- Textbook
  - ✓ No textbook is needed.
  - ✓ Lecture notes (PDF format) and recommended paper lists will be provided.

- Introduce Yourself
  - ✓ Submit your self-introduction slide (max. 5 pages) to the lecturer via E-mail (due date: 2020-09-11)
  - ✓ Required information: Name, department, e-mail, cell phone number, recent photo(s)

Assessments

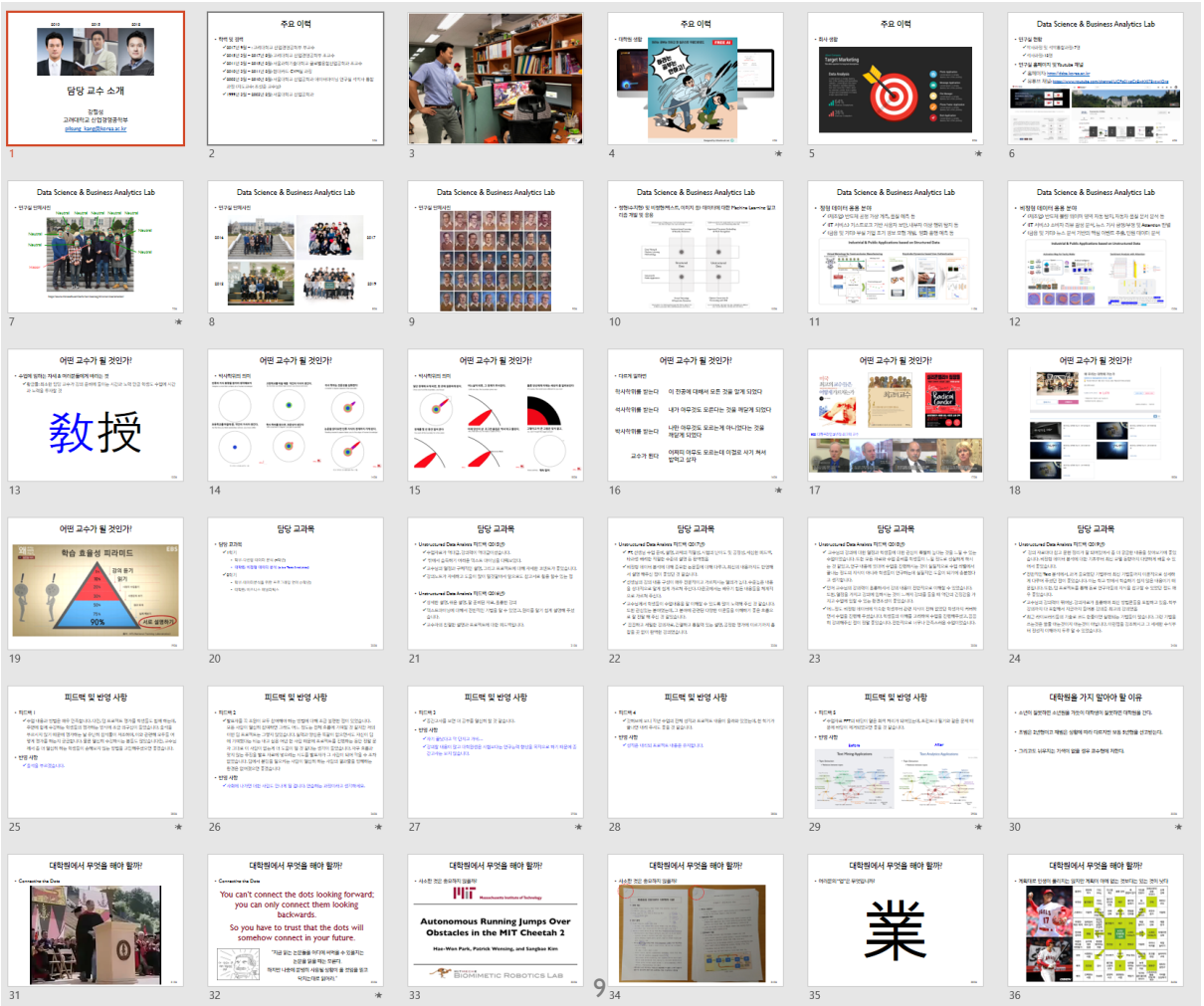
- 2 Exams (Midterm & Final, 30% each)
  - ✓ Two sheets (A4 size) of cheating paper is allowed

- 1 Final Project
  - ✓ Students are required to design "Data Analytics Project" for their own domain
  - ✓ Project report must include
    - The problem definition
    - Description on available data
    - Appropriate analytics algorithms and process
    - Expected result
    - Quantitative and qualitative effect when the designed project succeed

Introduction to Yourself

✓ Submit your self-introduction slide (max. 5 pages) to the lecturer via E-mail

- Due date: 2020-09-11



고려대학교 KOREA UNIVERSITY

DSBA Data Science & Business Analytics

Schedule

Week	Topics
1	Orientation
2	Multiple Linear Regression
3	R Exercise: Multiple Linear Regression
4	Logistic Regression
5	R Exercise: Logistic Regression
6	Decision Tree
7	R Exercise: Decision Tree
8	**Midterm Exam**
9	Dimensionality reduction
10	R Exercise: Dimensionality reduction
11	Artificial Neural Network
12	R Exercise: Dimensionality reduction
13	Clustering
14	R Exercise: Clustering
15	Association Rule Mining & R Exercise
16	**Final Exam & Project Report Submission**