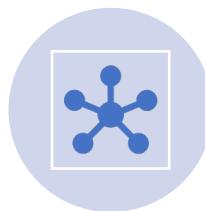
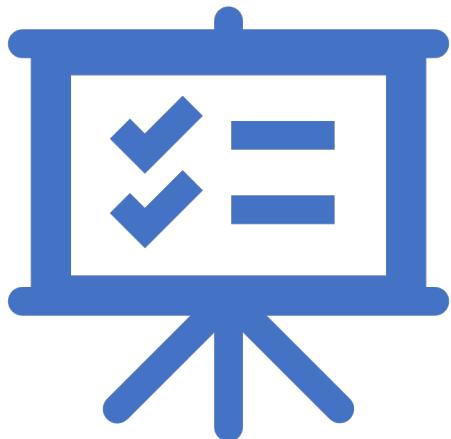


CS5056 Data Analytics

March 24, 2021

Class 7/16

Agenda



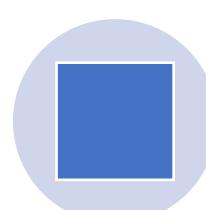
COMMENTS ON HWA4,
MIDTERM SCORES,
STUDENT PUBLICATIONS



TIME:
SUMMARY OF
PANEL DATA



TIME:
TIME SERIES
ANALYSIS FOR
PREDICTION

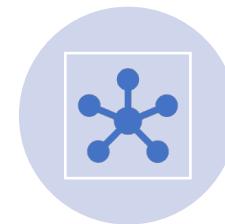
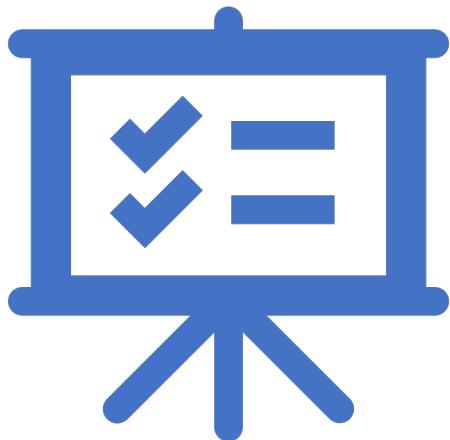


HANDS-ON
EXERCISES USING
R AND PYTHON

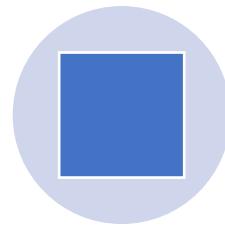
CS5056 Data Analytics

April 7, 2021
Class 8/16

Agenda



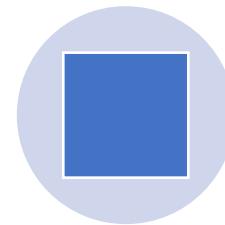
UNCERTAINTY:
THE BAYESIAN
APPROACH



EXPECTATION
MAXIMIZATION

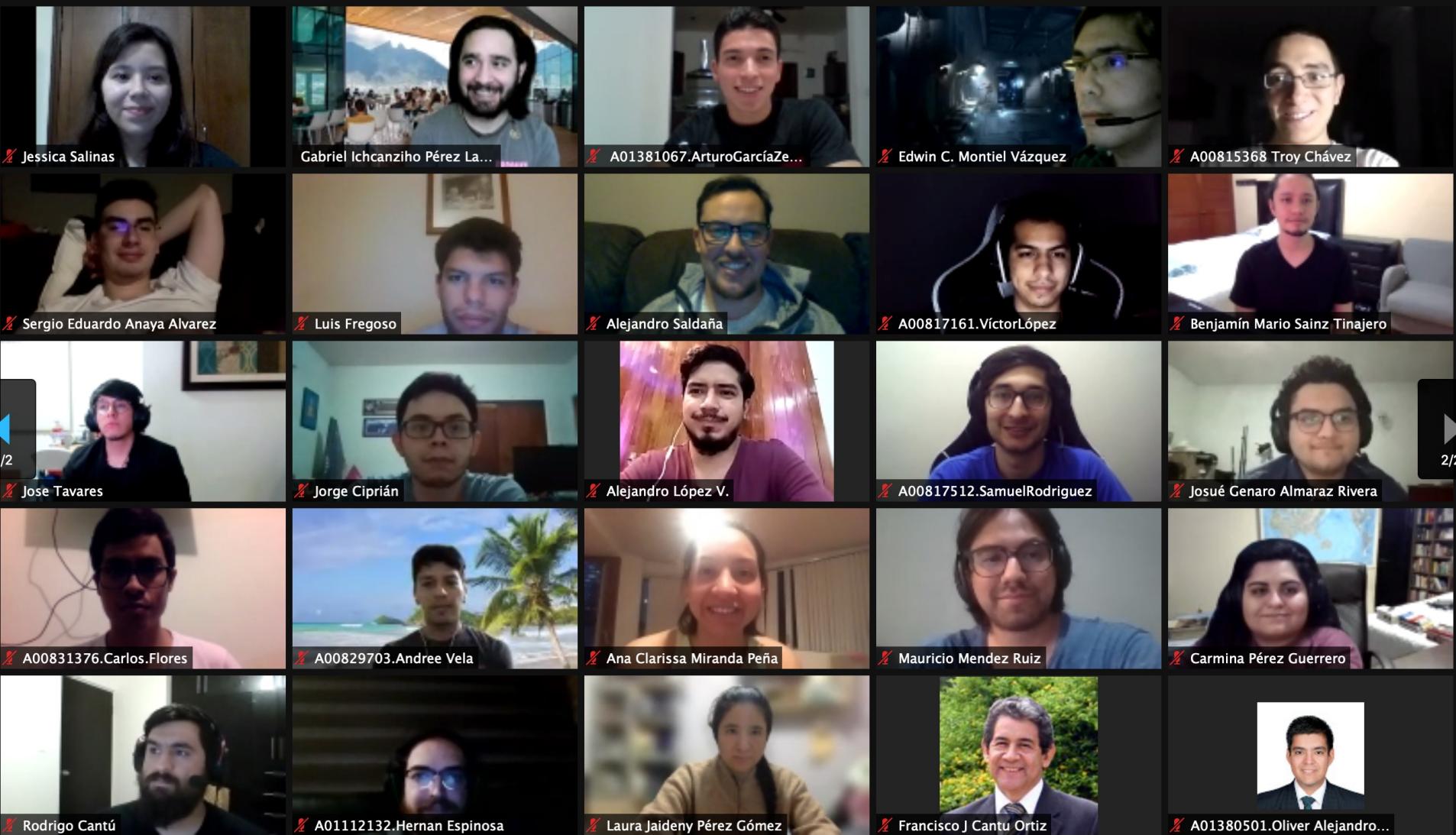


CASE STUDIES



HANDS-ON EXERCISES
USING PYTHON, R,
WEKA





Active Learning

With Various Hands-on Exercises using R and Python



**Enjoy the Class and have
Fun!!!**



HWA4

**Q2: Article on Panel
Data**

**Q3: Exercise with
Panel Data**

FPA3

Q1a – KNN (Ch6)

Q1b – Unbalanced DS (Ch7)

Q1c – ROC/AUC (Ch8)

Q2 – Comparing Models with Validation Metrics using your FPA dataset (Or House Pricing)

Conference Presentations

Gregorio

Gabriel

Genaro

Víctor





Rachid Sammouda



Francisco Cantu



Genaro Almaraz

Mazen Al-Sinan



Abdullah Albarak

SONDES DALLALI



imen mejri



Victor Lopez

Fathima Mirza



Zainab Aljaroudi



Dr. M.Umut Demiezen

Noorah Alnaghaimshi

ICDATA'21 The 17th International Conference on Data Science

July 26 - 29, 2021 - Las Vegas, Nevada, USA



Welcome to the 17th Int. Conference on Data Science (ICDATA'21)

Non-Attendance Policy/Presentation Modes due to Coronavirus/COVID-19 – please see info [here](#).

We invite you to attend ICDATA'21 and to submit papers. ICDATA'21 offers a 4 day single-track conference, keynote speeches by world renowned scientists, special sessions and free tutorials on all aspects of data science. In the past, the data science conference has attracted a lot of presentations in formal sessions plus keynotes, and excellent tutorials, with a lot of attendees plus many more visitors from other conferences of the congress.

For further information on the 2021 World Congress in Computer Science, Computer Engineering, and Applied Computing (CSCE'21) and its conferences, please use the following link: [CSCE'21](#)

ICDATA'21 is part of CSCE'2021. ICDATA'21 is an international conference for academics and practitioners held simultaneously with other joint conferences as part of [CSCE'21](#), the 2021 World Congress in Computer Science, Computer Engineering, and Applied Computing. CSCE'21 is one of the largest annual gatherings of researchers and practitioners in computer science, computer engineering and applied computing. Each of the joint conferences in CSCE is a premier conference for presentation of advances in their respective fields. The congress includes **20 major tracks** composed of 122 technical, research, and panel sessions as well as a number of keynote lectures and tutorials. All will be held simultaneously, same location and dates (July 26-29, 2021) to facilitate cross-disciplinary knowledge transfer. This year's Congress will be a hybrid event that combines a "live" in-person event with a "virtual" online component.

It is anticipated that CSCE'21 will attract between 1,000 and 2,000 participants from about 75 countries/territories. Participants range from established researchers on Professorial level, starting researchers (post-doc, PhD, Masters and Bachelor level) and contract researchers unto practitioners applying all aspects of data science in private or public companies or research institutions. 2019, 54% of attendees were from academia, 25% from industry; 20% from government and funding agencies; and 1% unknown. About half of the attendees were from outside USA; from 69 nations.

ICDATA'21 attracts quality papers & presentations. The data science conference has been highly ranked in the past. Please to not confuse ICDATA (formerly DMIN) with other „multi-conferences“ with approximately 100% acceptance rates. The conference maintains its own program committee and manages its own thorough and objective [review process](#) of at least 2 independent reviewers (leading academics & practitioners). Over the past ten years, ICDATA has an average acceptance rate of approximately 50%. While this rate is not as low as for some top-tier conferences, it is respectable and still allows researchers from less developed countries to actively participate in the conference.

Publication & Indexing. Due to the high quality of published papers in the proceedings of CSCE in recent years, this year (2020) ALL accepted papers will be published by **Springer Nature**.

Publisher: Springer Nature - Book Series: Transactions on Computational Science & Computational Intelligence,
<https://www.springer.com/series/11769>

<https://icdatascience.org/>

Student Articles in SCOPUS

Conference Paper

Analysis of hydrocarbon fuels imports under a new Mexican regime

0

Trevino-Lozano, R., Martinez-Gutierrez, J.R., Javier Cantu Ortiz, F., Ceballos Cancino, H.G.

Cited by

ICCAIS 2020 - 3rd International Conference on Computer Applications and Information Security,

2020, 9096848

[View abstract](#)  [View at Publisher](#) [Related documents](#)

Conference Paper

The World University Rankings Model Validation and a Top 50 Universities Predictive Model

0

De Luna Pamanes, A., Urbina, J.A.A., Ortiz, F.J.C., Cancino, H.G.C.

Cited by

ICCAIS 2020 - 3rd International Conference on Computer Applications and Information Security,

2020, 9096841

[View abstract](#)  [View at Publisher](#) [Related documents](#)

Conference Paper

Twitter Data Analysis on the Topic: Tec de Monterrey

0

Angeles Ceron, J.C., Jaideny Perez Gomez, L., Ceballos, H.G., Cantu-Ortiz, F.J.

Cited by

ICCAIS 2020 - 3rd International Conference on Computer Applications and Information Security,

2020, 9096806

[View abstract](#)  [View at Publisher](#) [Related documents](#)

Student Articles in Google Scholar

- An Exploration and Forecast of COVID-19 in Mexico with Machine Learning 2020
DA Gomez-Cravioto, RE Diaz-Ramos, FJ Cantu-Ortiz, HG Ceballos
- Twitter Data Analysis on the Topic: Tec de Monterrey 2020
JCA Ceron, LJP Gomez, HG Ceballos, FJ Cantu-Ortiz
2020 3rd International Conference on Computer Applications & Information ...
- The World University Rankings Model Validation and a Top 50 Universities Predictive Model 2020
ADL Pámanes, JAA Urbina, FJC Ortíz, HGC Cancino
2020 3rd International Conference on Computer Applications & Information ...
- Analysis of hydrocarbon fuels imports under a new Mexican regime 2020
R Treviño-Lozano, JR Martinez-Gutierrez, FJC Ortiz, HGC Cancino
2020 3rd International Conference on Computer Applications & Information ...
- Mexico City's Airbnb Listing Price Analysis Using Regression: A CRISP-DM Approach 2020
DA Gomez-Cravioto, RE Diaz-Ramos, VI Contreras-Miranda, ...
6th International Conference on Connected Smart Cities 21 – 23 July 2020 ...

Data Analytics

Articles Final Projects, Feb-June 2021

Id	Authors	Project Name	Status & Learning Outcomes
1	Diana Laura Aguilar	A Contrast Pattern-Based Analysis of the Restaurant Industry in the US in the Year 2020	
2	Josué Genaro Almaraz Rivera	COVID-19 Vaccination Progress Prediction in Mexico	
3	Cristian Yair Alvarado Elizalde	Analyzing Factors That Generate Company Bankruptcy	
	Mario Alberto Mendoza Cuevas		
4	Luis Alfonso Rojo Sánchez	Current Abortion Situation Analysis in Mexico	
	Sergio Eduardo Anaya Alvarez		
5	Andree Vela	INEGI 2020 Population Survey Analysis of Development Disparity of Disabled Individuals in Yucatan	
	Juan Carlos Ángeles		
6	Rodrigo Alejandro Cantú Hernández	Fintech vs. Traditional Banks: Mexican User Experience Market Analysis	
7	Alma Socorro Torres Torres	COVID-19 Impact on Labour Productivity by Industry and Region in the United Kingdom	
	Troy David Chávez Gutiérrez		
8	J. F. Ciprian-Sánchez	Sentiment analysis on information related to news coverage on well-known newsnetworks such as BBC, CNN, NBC, and Fox News	
	G. I. Pérez-Landa		
9	Alejandra De Luna Pámanes	A sport climbing study: A data science approach	
	Mauricio Méndez Ruiz		
10	Hernán Espinosa Rodríguez		
11	Jessica Salinas Espinosa	Sentiment Analysis for the Identification of Misinformation on COVID-19 Vaccines	
	Carlos Flores Munguía		
12	Luis Fregoso Aparicio	Data Analysis for an automobile accident database from Mexico to prevent accidents and reduce insurance payout	
13	Andrés Alberto López Esquivel	Electric motor data analysis for temperature estimation	
	Arturo García Zendejas		
14	Ramon Hinojosa Alejandro	Twitter and Reddit post analysis on the subject of Cryptocurrencies	

Data Analytics

Articles Final Projects, Feb-June 2021

Id	Authors	Project Name	Status & Learning Outcomes
15	Victor Ivan Lopez Rodriguez	COVID-19 New Cases Prediction after Lockdown using Mobility and Recovery Data in Monterrey	
16	Alejandro Saldana Rodriguez Alejandro Lopez Vazquez	Technical Indicators in Indexed Stocks: ACRISP-DM Approach	
17	Clarissa Miranda-Pérez	The Winning Formula for Football Competitions	
18	Edwin C. Montiel-Vázquez	Natural Language Processing for COVID-19 vaccine perception study	
19	Laura Jaideny Pérez Gómez	Discussion topics on COVID-19 vaccine tweets	
20	Carmina Pérez Guerrero	Metric Analysis for the Semantic Segmentation of Jet Fire Temperature Zones	
21	Gregorio Arturo Reyes González	A Bayesian Method Approach to Digital Violence Against Women	
22	Astrid Rivera Partida Diego Villatoro Gerónimo	Biodiversity of the Worldwide Food Production	
24	Alfonso Ángel Medina-Santana	Global Environment Facility impact on renewable energy-based rural electrification: A data analytics perspective	
25	Samuel Guadalupe Rodríguez Rodríguez	Food retail sales prediction using weather forecast	
26	Benjamín Mario Sainz Tinajero	Performance Analysis and Comparison of Multi-objective Evolutionary Clustering Algorithms	
27	Juan Andrés Talamas Carvajal	Social media Effects on the market: Reddit and Twitter Data analysis on Stocks	
28	Oliver Alejandro Vélazquez Flores	League of Legends and Teamfight Tactics (TBD)	

Francisco J. Cantú-Ortiz, PhD

Professor of Computer Science and Artificial Intelligence
Tecnológico de Monterrey
Enago-Academy Advisor for Strategic Alliances

E-mail: fcantu@tec.mx, fjcantor@gmail.com

Cel: +52 81 1050 8294, SNI-2 CVU: 9804

Personal Page: <http://semtech.mty.itesm.mx/fcantu/>

Facebook: fcantu; Twitter: @fjcantor; Skype: fjcantor

Orcid: 0000-0002-2015-0562

Scopus ID:6701563520

Researcher ID: B-8457-2009

https://www.researchgate.net/profile/Francisco_Cantu-Ortiz

<https://scholar.google.com.mx/citations?hl=es&user=45-uuK4AAAAJ>

<https://itesm.academia.edu/FranciscoJavierCantuOrtiz>

Ave. Eugenio Garza Sada No. 2501, Monterrey N.L., C.P. 64849, México