



2023 Master internship at University of Cádiz

TITLE

Competitive Intelligence for hotel establishments.

LAB & PEOPLE

- Name of the hosting lab: Institute for Research on Sustainable Social Development (INDESS)
- General activities of the lab: The INDESS engages in research, policy development, knowledge dissemination, capacity building, and advocacy to promote sustainable social development. Through collaborations, data analysis, and interdisciplinary approaches, INDESS aims to address social challenges, foster community engagement, and contribute to positive and equitable social change.
- Website: <https://indess.uca.es/>
- Number of staff / PhD: 200 aprox.
- Supervisor name and contact: María Paula Lechuga Sancho

TOPIC OF THE INTERNSHIP

- Scientific context of the internship (max 20 lines)

Competitive Intelligence aims to provide organizations with valuable insights and strategic information to gain a competitive advantage. In particular, in the process of understanding and interpreting competitors' strategies in the tourism sector, managers can utilize tools that range from basic ones, such as direct observation of establishments or simply reading reviews and online content generated by customers, to more advanced ones based on massive internet data downloads, text mining, and social network analysis as big data techniques. In this sense, the growing development of internet platforms that collect user ratings and opinions offers great opportunities for research and their application in tools for strategic decision-making.

Therefore, the general objective I would like to pursue with the master's student is to develop an analysis and competitive intelligence model for hotel establishments based on an integrated model of text mining and co-word analysis. To achieve this goal, the intention is to adapt the recently proposed competitive intelligence model for the hotel sector by Köseoglu et al. (2021), replacing the proposed text-net analysis with strategic mapping representation and the dynamic approach inherent in co-word analysis, a methodology derived from Bibliometrics in which the requesting professor has proven expertise and whose validity is sufficiently demonstrated for exploring the conceptual structure of information contained in large volumes of data.

Keywords : Competitive analysis; competitive intelligence; strategic analysis; hotels; big data; text mining; co-word; network analytics; online reviews

Bibliography

- Adhinugroho, Y., Putra, A. P., Luqman, M., Ermawan, G. Y., Takdir, S. M., & Pramana, S. (2020). Development of online travel Web scraping for tourism statistics in Indonesia. *Information Research*, 25(4), 885. doi:10.47989/irpaper885
- Akbaba, A. (2006). Measuring service quality in the hotel industry: A study in a business hotel in Turkey. *International Journal of Hospitality Management*, 25(2), 170-192.
- Asghar, N. (2016). Yelp dataset challenge: Review rating prediction. arXiv preprint arXiv:1605.05362
- Bao, Y. (2020). Competitive intelligence and its impact on innovations in tourism industry of China: An empirical research. *PloS one*, 15(7), e0236412.
- Bennett, R. (2003). Competitor analysis practices of British charities. *Marketing Intelligence & Planning*, 21(6), 335-345. doi:10.1108/02634500310499194
- Berezina, K., Bilgihan, A., Cobanoglu, C., & Okumus, F. (2016). Understanding satisfied and dissatisfied hotel customers: Text mining of online hotel reviews. *Journal of Hospitality Marketing & Management*, 25(1), 1-24.
- Bergen, M., & Peteraf, M. (2002). Competitor identification and competitor analysis: A broad-based managerial approach. *Managerial and Decision Economics*, 23, 157-169.
- Bose, R. (2008). Competitive intelligence process and tools for intelligence analysis. *Industrial Management & Data Systems*, 108(4), 510-528.
- Britt, P. (2006). The new competitive intelligence: Raising the confidence quotient. *KM World*, 15(10), 10-12.
- Bulger, N. J. (2011). Intelligence transformation: Building a complete intelligence capability. *Proceedings of GIL (Growth, Innovation, and Leadership) Conference*. San Antonio, TX: Strategic and Competitive Intelligence Professionals and The Frost & Sullivan Institute.
- Bulger, N. J. (2016). The evolving role of intelligence: Migrating from traditional competitive intelligence to integrated intelligence. *International Journal of Intelligence, Security, and Public Affairs*, 18(1), 57-84. doi:10.1080/23800992.2016.1150691

- Calheiros, A. C., Moro, S., & Rita, P. (2017). Sentiment classification of consumer-generated online reviews using topic modeling. *Journal of Hospitality Marketing & Management*, 26(7), 675–693.
- Callon, M., Courtial, J.P., & Penan, H. (Eds.). (1995). *Cienciometría: La medición de la actividad científica: De la bibliometría a la vigilancia tecnológica*. Gijón: Trea
- Cavallo, A., Sanasi, S., Ghezzi, A., & Rangone, A. (2020). Competitive intelligence and strategy formulation: Connecting the dots. *Competitiveness Review*, 31(2), 250–275. doi:10.1108/CR-01-2020-0009
- Chau, M., & Xu, J. (2012). Business intelligence in blogs: Understanding consumer interactions and communities. *MIS Quarterly*, 36(4), 1189–1216.
- Chen, J., & Shen, X. L. (2015). Consumers' decisions in social commerce context: An empirical investigation. *Decision Support Systems*, 79, 55-64.
- Cobo, M. J., Lopez-Herrera, A. G., Herrera-Viedma, E., & Herrera, F. (2011). An approach for detecting, quantifying, and visualizing the evolution of a research field: A practical application to the Fuzzy Sets Theory field. *Journal of Informetrics*, 5(1), 146–166. <https://doi.org/10.1016/j.joi.2010.10.002>
- De Pelsmacker, P., Muller, M. L., Viviers, W., Saayman, A., Cuyvers, L., & Jegers, M. (2005). Competitive intelligence practices of South African and Belgian exporters. *Marketing Intelligence & Planning*, 23(6), 606–620.
- Desai, B. H., & Bawden, D. (1993). Competitor intelligence in the pharmaceutical industry: The role of the information professional. *Journal of Information Science*, 19(5), 327–338.
- Du Toit, A. S. (2003). Competitive intelligence in the knowledge economy: What is in it for South African manufacturing enterprises? *International Journal of Information Management*, 23(2), 111–120.
- Fernandes, T., & Fernandes, F. (2018). Sharing dissatisfaction online: Analyzing the nature and predictors of hotel guests negative reviews. *Journal of Hospitality Marketing & Management*, 27(2), 127–150.
- Gao, B., Li, X., Liu, S., & Fang, D. (2018). How power distance affects online hotel ratings: The positive moderating roles of hotel chain and reviewers' travel experience. *Tourism Management*, 65, 176–186.
- Geetha, M., Singha, P., & Sinha, S. (2017). Relationship between customer sentiment and online customer ratings for hotels: An empirical analysis. *Tourism Management*, 61, 43–54.
- George, G., Haas, M. R., & Pentland, A. (2014). Big data and management. *Academy of Management Journal*, 57(2), 321–326.

- Ginsberg, J., Mohebbi, M. H., Patel, R. S., Brammer, L., Smolinski, M. S., & Brilliant, L. (2009). Detecting influenza epidemics using search engine query data. *Nature*, *457*(7232), 1012–1014.
- Gur, F. A., & Greckhamer, T. (2019). Know thy enemy: A review and agenda for research on competitor identification. *Journal of Management*, *45*(5), 2072–2100.
- Ha, J., Park, K., & Park, J. (2016). Which restaurant should I choose? Herd behavior in the restaurant industry. *Journal of Foodservice Business Research*, *19*(4), 396–412.
- Han, L., Jones, G. J., & Smeaton, A. F. (2021). Translation quality assessment: A brief survey on manual and automatic methods. arXiv preprint arXiv:2105.03311.
- Höpken, W., Eberle, T., Fuchs, M., & Lexhagen, M. (2021). Improving tourist arrival prediction: A big data and artificial neural network approach. *Journal of Travel Research*, *60*(5), 998–1017.
- Hsu, M. F., Chang, T. M., & Lin, S. J. (2020). News-based soft information as a corporate competitive advantage. *Technological and Economic Development of Economy*, *26*(1), 48–70.
- Hu, X., & Yang, Y. (2021). What makes online reviews helpful in tourism and hospitality? A bare-bones meta-analysis. *Journal of Hospitality Marketing & Management*, *30*(2), 139–158.
- Kahaner, L. (1997). *Competitive intelligence: How to gather analyze and use information to move your business to the top*. New York, NY: Simon and Schuster Inc.
- Kassinis, G. I., & Soteriou, A. C. (2015). Environmental and quality practices: using a video method to explore their relationship with customer satisfaction in the hotel industry. *Operations Management Research*, *8*(3), 142-156.
- Kollat, D. T., Engel, J. F., & Blackwell, R. D. (1970). Current problems in consumer behavior research. *Journal of Marketing Research*, *7*(3), 327–332.
- Köseoglu, M. A., Chan, E. S., Okumus, F., & Altin, M. (2019). How do hotels operationalize their competitive intelligence efforts into their management processes? Proposing a holistic model. *International Journal of Hospitality Management*, *83*, 283–292.
- Köseoglu, M. A., Morvillo, A., Altin, M., De Martino, M., & Okumus, F. (2020). Competitive intelligence in hospitality and tourism: A perspective article. *Tourism Review*, *75*(1), 239–242. doi:10.1108/TR-06-2019-0224
- Köseoglu, M. A., Mehraliyev, F., Altin, M., & Okumus, F. (2021a). Competitor intelligence and analysis (CIA) model and online reviews: Integrating big data text mining with network analysis for strategic analysis. *Tourism Review*, *76*(3), 529–552. doi:10.1108/TR-10-2019-0406
- Köseoglu, M. A., Yick, M. Y. Y., & Okumus, F. (2021b). Coopetition strategies for competitive intelligence practices: Evidence from full-service hotels. *International Journal of Hospitality Management*, *99*, 103049. doi:10.1016/j.ijhm.2021.103049

- Lemon, K. N., & Verhoef, P. C. (2016). Understanding customer experience throughout the customer journey. *Journal of Marketing*, *80*(6), 69–96.
- Line, N. D., Dogru, T., El-Manstrly, D., Buoye, A., Malthouse, E., & Kandampully, J. (2020). Control, use and ownership of big data: A reciprocal view of customer big data value in the hospitality and tourism industry. *Tourism Management*, *80*, 104106. doi:10.1016/j.tourman.2020.104106
- Manyika, J., Chui, M., Brown, B., Bughin, J., Dobbs, R., Roxburgh, C., & Byers, A. H. (2011). *Big Data: The next frontier for innovation, competition, and productivity*. McKinsey Global Institute. Retrieved from <https://www.mckinsey.com/business-functions/mckinsey-digital/our-insights/big-data-the-next-frontier-for-innovation>
- Marin, J., & Poulter, A. (2004). Dissemination of competitive intelligence. *Journal of Information Science*, *30*(2), 165–180.
- Mayer-Schönberger, V., & Cukier, K. (2013). *Big Data: A revolution that will transform how we live, work, and think*. New York, NY: Houghton Mifflin Harcourt.
- Mehta, K., Salvi, M., Dand, R., Makharia, V., & Natu, P. (2020). A comparative study of various approaches to adaptive web scraping. In A. Kumar, M. Paprzycki, & V. K. Gunjan (Eds.), *ICDSMLA 2019: Proceedings of the 1st International Conference on Data Science, Machine Learning and Applications* (pp. 1245–1256). Singapore: Springer.
- Moral-Muñoz, J. A., Herrera-Viedma, E., Santisteban-Espejo, A., & Cobo, M. J. (2020). Software tools for conducting bibliometric analysis in science: An up-to-date review. *Profesional de la Información*, *29*(1).
- Nandagiri, V., & Philip, L. (2018). Impact of influencers from Instagram and YouTube on their followers. *International Journal of Multidisciplinary Research and Modern Education*, *4*(1), 61–65.
- Porter, M. E. (1980). *Competitive strategy: Techniques for analyzing industries and competitors*. New York, NY: Free Press.
- Quintero, J. A. J., & Salguero, G. C. (2016). Competitive intelligence in the tourism sector, with special focus on Southern Europe. *Tourism & Management Studies*, *12*(1), 136–144.
- Ranjan, J., & Foropon, C. (2021). Big data analytics in building the competitive intelligence of organizations. *International Journal of Information Management*, *56*, 102231. doi:10.1016/j.ijinfomgt.2020.102231
- Rinka, X., & Pratt, S. (2018). Social media influencers as endorsers to promote travel destinations: An application of self-congruence theory to the Chinese Generation Y. *Journal of Travel & Tourism Marketing*, *35*(7), 958–972.
- Rouach, D., & Santi, P. (2001). Competitive intelligence adds value: Five intelligence attitudes. *European Management Journal*, *19*, 552–559.

- Salguero, G. C., Resende, P. C. Jr., & Fernández, I. A. (2017). Proposal of an assessment scale in competitive intelligence applied to the tourism sector. *Journal of Intelligence Studies in Business*, 7(2) 38–47.
- Saurkar, A. V., Pathare, K. G., & Gode, S. A. (2018). An overview on web scraping techniques and tools. *International Journal on Future Revolution in Computer Science & Communication Engineering*, 4(4), 363–367.
- Settembre-Blundo, D., González-Sánchez, R., Medina-Salgado, S., & García-Muiña, F. E. (2021). Flexibility and resilience in corporate decision making: A new sustainability-based risk management system in uncertain times. *Global Journal of Flexible Systems Management*, 22(2), 107–132.
- Simkin, L., & Cheng, A. (1997). Understanding competitors' strategies: The practitioner-academic gap. *Marketing Intelligence & Planning*, 15(3), 124–134.
- Vanden Broucke, S., & Baesens, B. (2018). From web scraping to web crawling. In S. Vanden Broucke & B. Baesens (Eds.), *Practical web scraping for data science* (pp. 155–172). Berkeley, CA: Apress.
- Wood, S. A., Guerry, A. D., Silver, J. M., & Lacayo, M. (2013). Using social media to quantify nature-based tourism and recreation. *Scientific Reports*, 3(1), 2976. doi:10.1038/srep02976
- Worsfold, K., Fisher, R., McPhail, R., Francis, M., & Thomas, A. (2016). Satisfaction, value and intention to return in hotels. *International Journal of Contemporary Hospitality Management*, 28 (11), 2570-2588
- Wu, R., Wu, H. H., & Wang, C. L. (2021). Why is a picture 'worth a thousand words'? Pictures as information in perceived helpfulness of online reviews. *International Journal of Consumer Studies*, 45(3), 364–378.
- Xia, H., Vu, H. Q., Lan, Q., Law, R., & Li, G. (2019). Identifying hotel competitiveness based on hotel feature ratings. *Journal of Hospitality Marketing & Management*, 28(1), 81–100.
- Xiang, Z., Schwartz, Z., Gerdes Jr, J. H., & Uysal, M. (2015). What can big data and text analytics tell us about hotel guest experience and satisfaction? *International Journal of Hospitality Management*, 44, 120–130.
- Xiang, Z., Du, Q., Ma, Y., & Fan, W. (2017). A comparative analysis of major online review platforms: Implications for social media analytics in hospitality and tourism. *Tourism Management*, 58, 51–65. doi:10.1016/j.tourman.2016.10.001
- Xu, X., & Li, Y. (2016). The antecedents of customer satisfaction and dissatisfaction toward various types of hotels: A text mining approach. *International Journal of Hospitality Management*, 55, 57–69.
- Yang, Y., Pan, B., & Song, H. (2014). Predicting hotel demand using destination marketing organization's web traffic data. *Journal of Travel Research*, 53(4), 433-447.

- Yang, E. C. L., Sharif, S. P., & Khoo-Lattimore, C. (2015). Tourists' risk perception of risky destinations: The case of Sabah's eastern coast. *Tourism and Hospitality Research*, 15(3), 206–221.
- Yap, C. S., Rashid, M. Z. A., & Sapuan, D. A. (2014). Perceived environmental uncertainty and competitive intelligence practices. *The Journal of Information and Knowledge Management Systems*, 43, 462–481.
- Ye, F., Xia, Q., Zhang, M., Zhan, Y., & Li, Y. (2022). Harvesting online reviews to identify the competitor set in a service business: evidence from the hotel industry. *Journal of Service Research*, 25(2), 301-327.
- Zhang, J. J., & Mao, Z. (2012). Image of all hotel scales on travel blogs: Its impact on customer loyalty. *Journal of Hospitality Marketing & Management*, 21(2), 113–131.
- Zhao, Y., Xu, X., & Wang, M. (2019). Predicting overall customer satisfaction: Big data evidence from hotel online textual reviews. *International Journal of Hospitality Management*, 76, 111–121.
- Zheng, T., Wu, F., Law, R., Qiu, Q., & Wu, R. (2021). Identifying unreliable online hospitality reviews with biased user-given ratings: A deep learning forecasting approach. *International Journal of Hospitality Management*, 92, 102658. doi:10.1016/j.ijhm.2020.102658
- Zupic, I., & Čater, T. (2015). Bibliometric methods in management and organization. *Organizational Research Methods*, 18(3), 429-472.

- Tasks and duties entrusted to the student:

- Literature Review: Conducting a comprehensive review of relevant literature on competitive intelligence in the tourism sector to identify existing research gaps and establish a theoretical foundation for the project.
- Data Collection: Designing and implementing strategies for data collection, which may include surveys, interviews, observations, or secondary data analysis such as online reviews, to gather information on competitive intelligence practices in the tourism industry. Also, it would be necessary to identify and evaluate existing competitive intelligence practices in the tourism sector, highlighting their strengths, weaknesses, and potential areas of improvement.
- Data Analysis: Applying appropriate analytical techniques, such as statistical analysis or content analysis, to analyze the collected data and derive meaningful insights related to competitive intelligence in the tourism sector.
- Report Writing: Prepare reports or research papers summarizing the research objectives, methodology, findings, and conclusions, adhering to academic writing standards and guidelines.
- Dissemination of Findings: Collaborating with the project team to disseminate research findings through publications, presentations, and potentially at conferences or seminars or other appropriate channels to contribute to the scientific community and industry practitioners.

- Skills to be acquired or developed:

1. Research Skills: Conducting thorough literature reviews, gathering relevant data, and analyzing research findings.
2. Data Analysis: Utilizing statistical tools and techniques to analyze and interpret data related to competitive intelligence in the tourism sector.
3. Critical Thinking: Assessing and evaluating the validity and reliability of research findings and drawing logical conclusions.
4. Problem-solving: Identifying challenges and developing innovative solutions to address competitive intelligence issues in the tourism sector.
5. Strategic Thinking: Understanding the broader strategic context of the tourism industry and applying competitive intelligence insights to inform strategic decision-making.
6. Communication Skills: Effectively presenting research findings and insights to both academic and industry audiences, both orally and in writing.
7. Collaborative Skills: Working with industry professionals and academic advisors to gather data, exchange knowledge, and validate research outcomes.
8. Ethical Considerations: Understanding and adhering to ethical guidelines when collecting and using data, ensuring confidentiality and privacy.
9. Adaptability: Being open to learning new methodologies, tools, and techniques relevant to competitive intelligence in the evolving tourism sector.
10. Technology Proficiency: Utilizing software and technological tools for data collection, analysis, and visualization.
11. Project Management: Planning, organizing, and executing a research project within specified timelines and resource constraints.
12. Presentation Skills: Delivering clear and compelling presentations that effectively communicate research findings and recommendations.
13. Entrepreneurial Mindset: Identifying opportunities for innovation and entrepreneurship within the tourism sector based on competitive intelligence insights.
14. Decision-making: Applying critical thinking and analytical skills to support informed decision-making by utilizing competitive intelligence data.
15. Cross-cultural Competence: Understanding the diverse cultural context of the tourism industry and considering its influence on competitive intelligence strategies.
16. Time Management: Efficiently managing time and resources to meet project deadlines and deliver high-quality research outcomes.

17. Attention to Detail: Maintaining accuracy and precision in data collection, analysis, and reporting.

18. Continuous Learning: Staying updated with the latest research, trends, and developments in the field of competitive intelligence and the tourism sector.

19. Networking: Building professional connections within the academic and industry community to foster collaboration and exchange of knowledge.

20. Entrepreneurial Thinking: Identifying opportunities for innovation and entrepreneurship within the tourism sector based on competitive intelligence insights.

PROFILE OF THE DESIRED STUDENT

- Minimum level of study required: Máster degree

- Field(s) of study: Business, Management, Tourism.

- Scientific skills :

1. Proficiency in research methodology specific to competitive intelligence in the tourism sector, mainly being able to make comparative analysis of online review platforms in the tourism sector, and design a web scraping procedure for mass data downloading.

2. Strong data analysis and statistical skills for interpreting and analyzing competitive intelligence data.

3. Ability to critically evaluate literature, think analytically, and communicate research findings effectively.

- Language skills required : English, and Spanish proficiency will be valued.

THE INTERNSHIP ASSIGNMENT:

Desired duration of the internship (in months): 9

Desired Starting date of the mission: *(please indicate the level of flexibility). High flexibility*

Indicative weekly schedule: *25h / week*

Remuneration : No

Erasmus grant / Internship agreement: an internship agreement will be signed.

To SEA-EU students:

If you're interested please send your CV and letter of motivation to the scientist in charge, paula.lechuga@uca.es before the 30/09/2023.