Universidad Nacional de Ingeniería (UNI)
Facultad de Ciencias
Departamento de Ciencia de la Computación
Escuela Profesional de Ciencia de la Computación

Libro de Bibliografía por curso

– 2026-I–

Lima: 2 de diciembre de 2025

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Índice general

Capítulo 1

Primer Semestre

1.1. CS111. Introducción a la Programación

[Brookshear and Brylow, 2019] Brookshear, J. G. and Brylow, D. (2019). *Computer Science: An Overview*. Pearson, global edition edition.

[Guttag, 2013] Guttag, J. V. (2013). . *Introduction To Computation And Programming Using Python*. MIT Press.

[Zelle, 2010] Zelle, J. (2010). *Python Programming: An Introduction to Computer Science*. Franklin, Beedle & Associates Inc.

1.2. BMA101. Algebra Linear

[Lay et al., 2016] Lay, D. C., Lay, S. R., and McDonald, J. J. (2016). *Linear Algebra and Its Applications*. Pearson.

[Strang, 2016] Strang, G. (2016). *Introduction to Linear Algebra*. Wellesley-Cambridge Press.

1.3. BMA102. Cálculo Diferencial

[Larson and Edwards, 2014] Larson, R. and Edwards, B. H. (2014). *Calculus*. Cengage Learning.

[Stewart, 2015] Stewart, J. (2015). *Calculus: Early Transcendentals*. Cengage Learning.

1.4. BCH101. Química I

[Brown et al., 2017] Brown, T. L., Jr., H. E. L., Bursten, B. E., Murphy, C. J., and Woodward, P. M. (2017). *Chemistry: The Central Science*. Pearson.

[Chang and Goldsby, 2016] Chang, R. and Goldsby, K. A. (2016). *Chemistry*. McGraw-Hill Education.

1.5. FG001. Electivo Formación General

[Robbins, 2004] Robbins, S. (2004). *Comportamiento Organizacional*. México,Pearson Educación.

1.6. BEI101. Inglés I

[Cambridge, 2006] Cambridge (2006). *Diccionario Inglés-Espanol Cambridge*. Editorial Oxford.

[MacGrew, 1999] MacGrew, J. (1999). *Focus on Grammar Basic*. Editorial Oxford.

[Soars and John, 2002d] Soars, L. and John (2002d). *American Headway N 2 Student Book*. Editorial Oxford.

Capítulo 2

Segundo Semestre

2.1. CS100. Introducción a la Ciencia de la Computación

[Brookshear and Brylow, 2019] Brookshear, J. G. and Brylow, D. (2019). *Computer Science: An Overview*. Pearson, global edition edition.

2.2. CS112. Programación Orientada a Objetos I

[Deitel, 2017] Deitel, D. . (2017). *C++17 - The Complete Guide*. Pearson, 10th edition.

[Josuttis, 2019] Josuttis, N. M. (2019). *C++17 - The Complete Guide*. 1st edition.

[Stroustrup, 2013] Stroustrup, B. (2013). *The C++ Programming Language*. Addison-Wesley, 4th edition.

2.3. CS1D1. Estructuras Discretas

[Grimaldi, 1997] Grimaldi, R. (1997). *Matemáticas Discretas y Combinatoria*. Addison Wesley Iberoamericana.

[Grimaldi, 2003] Grimaldi, R. (2003). *Discrete and Combinatorial Mathematics: An Applied Introduction*. Pearson, 5 ed. edition.

[Johnsonbaugh, 1999] Johnsonbaugh, R. (1999). *Matemáticas Discretas*. Prentice Hall, México.

[Rosen, 2007] Rosen, K. H. (2007). *Discrete Mathematics and Its Applications*. 7 ed. edition.

[Scheinerman, 2012] Scheinerman, E. R. (2012). *Mathematics: A Discrete Introduction*. 3 ed. edition.

[Velleman, 2006] Velleman, D. J. (2006). *How to Prove It: A Structured Approach*. 2nd edition.

2.4. BMA103. Cálculo Integral

[Larson and Edwards, 2014] Larson, R. and Edwards, B. H. (2014). *Calculus*. Cengage Learning.

[Stewart, 2015] Stewart, J. (2015). *Calculus: Early Transcendentals*. Cengage Learning.

2.5. BFI101. Física I

[Serway and Jewett, 2018] Serway, R. A. and Jewett, J. W. (2018). *Physics for Scientists and Engineers with Modern Physics*. Cengage Learning.

[Young and Freedman, 2018] Young, H. D. and Freedman, R. A. (2018). *University Physics with Modern Physics*. Pearson.

2.6. BEI102. Inglés II

[Cambridge, 2006] Cambridge (2006). *Diccionario Inglés-Espanol Cambridge*. Editorial Oxford.

[MacGrew, 1999] MacGrew, J. (1999). *Focus on Grammar Basic*. Editorial Oxford.

[Soars and John, 2002a] Soars, L. and John (2002a). *American Headway N 1 Student Book*. Editorial Oxford.

Capítulo 3

Tercer Semestre

3.1. CS113. Programación Orientada a Objetos II

[Deitel, 2017] Deitel, D. . (2017). *C++17 - The Complete Guide*. Pearson, 10th edition.

[M.Josuttis, 2019] M.Josuttis, N. (2019). *C++17-The Complete Guide*. 1st edition.

[Stroustrup, 2013] Stroustrup, B. (2013). *The C++ Programming Language, 4th edition*. Addison-Wesley.

[Vandervoorde et al., 2017] Vandervoorde, D., Josuttis, N., and Gregor, D. (2017). *C++ Templates: The Complete Guide*. Addison-Wesley, 2nd edition.

3.2. CS2B1. Desarrollo Basado en Plataformas

[Annuzzi et al., 2013] Annuzzi, J., Darcey, L., and Conder, S. (2013). *Introduction to Android Application Development: Android Essentials*. Developer's Library. Pearson Education.

[Fielding, 2000] Fielding, R. T. (2000). Fielding dissertation: Chapter 5: Representational state transfer (rest). *http://www. ics. uci. edu/˜ fielding/pubs/dissertation/rest_arch_style. htm*.

[Fielding, 2021] Fielding, R. T. (2021). Rest apis must be hypertext-driven: Revisiting the architectural constraints. *IEEE Software*, 38(3):27–32. Artículo del creador de REST actualizando sus principios para aplicaciones modernas.

[Freeman and Robson, 2011] Freeman, E. and Robson, E. (2011). *Head first HTML5 programming: building web apps with JavaScript*. O'Reilly Media, Inc.

[Grove, 2009] Grove, R. (2009). *Web Based Application Development*. Jones & Bartlett Learning.

[Martin, 2017] Martin, R. C. (2017). *Clean architecture: a craftsman's guide to software structure and design*. Prentice Hall Press.

3.3. AI161. IA Aplicada

[Bender et al., 2021] Bender, E. M., Gebru, T., et al. (2021). On the dangers of stochastic parrots: Can language models be too big? *FAccT '21: Proceedings of the 2021 ACM Conference on Fairness, Accountability, and Transparency.* Foundational paper on AI ethics with ongoing relevance.

[Cloud, 2024] Cloud, A. (2024). Ai ethics and best practices in chinese context. Chinese perspective on AI ethics and implementation guidelines.

[DeepSeek, 2024] DeepSeek (2024). Deepseek model documentation and best practices. Official documentation for DeepSeek AI models and usage guidelines.

[Google, 2024] Google (2024). Introduction to responsible ai. Google's updated framework for responsible AI development and use.

[Institute, 2024a] Institute, P. E. (2024a). Prompt engineering guide. Continuously updated comprehensive prompt engineering resource.

[Institute, 2024b] Institute, T. R. (2024b). Ai development in china: Current status and future trends. Comprehensive analysis of Chinese AI ecosystem development.

[Lab, 2023] Lab, T. A. (2023). Responsible ai practices in chinese tech industry. Industry perspective on AI ethics from leading Chinese tech company.

[Microsoft, 2024] Microsoft (2024). Prompt crafting for ai systems. Official Microsoft prompt engineering guidance updated for 2024.

[Mollick, 2023] Mollick, E. (2023). Chatgpt and how ai disrupts industries. *Harvard Business Review.* Analysis of AI's practical impact across global sectors.

[Mollick and Mollick, 2024] Mollick, E. and Mollick, L. (2024). *Co-Intelligence: Living and Working with AI.* Penguin Random House. Practical guide to human-AI collaboration.

[Ng, 2024] Ng, A. (2024). Ai for everyone. Updated online course covering AI fundamentals for non-technical audiences.

[of Cyberspace Studies, 2024] of Cyberspace Studies, C. A. (2024). Ai governance and ethics in china. Official Chinese perspective on AI governance and ethical standards.

[OpenAI, 2024] OpenAI (2024). Best practices for prompt engineering. Updated official prompt engineering guidelines from OpenAI.

[UNESCO, 2023] UNESCO (2023). Ai and education: Guidance for policymakers. Latest guidance on AI literacy and ethical implementation in education.

[Union, 2024] Union, E. (2024). Ai act: Regulatory framework. Comprehensive AI regulation framework effective 2024.

[White et al., 2023] White, J. et al. (2023). A prompt pattern catalog to enhance prompt engineering with chatgpt. Peer-reviewed research on prompt engineering patterns.

3.4. BMA104. Cálculo Diferencial e Integral Avanzado

3.5. ST251. Estadística y Probabilidades

[Devore, 2016] Devore, J. L. (2016). *Probability and Statistics for Engineering and the Sciences*. Cengage Learning.

[Ross, 2014] Ross, S. M. (2014). *A First Course in Probability*. Pearson.

3.6. BEI201. Inglés III

[Cambridge, 2006] Cambridge (2006). *Diccionario Inglés-Espanol Cambridge*. Editorial Oxford.

[MacGrew, 1999] MacGrew, J. (1999). *Focus on Grammar Basic*. Editorial Oxford.

[Soars and John, 2002d] Soars, L. and John (2002d). *American Headway N 2 Student Book*. Editorial Oxford.

Capítulo 4

Cuarto Semestre

4.1. CS210. Algoritmos y Estructuras de Datos

[Cormen et al., 2009] Cormen, T. H., Leiserson, C. E., Rivest, R. L., and Stein, C. (2009). *Introduction to Algorithms*. MIT Press, third edition edition. ISBN: 978-0-262-53305-8.

[Fager et al., 2014] Fager, J., Yépez, W. L. P., Villacrés, M., Martinez, L. A. P., Ochoa, D., and Cuadros-Vargas, E. (2014). *Estructura de datos*. Iniciativa Latinoamericana de Libros de Texto Abiertos (LATIN), first edition edition.

[Knuth, 1997] Knuth, D. E. (1997). *The Art of Computer Programming, Vol. 1: Fundamental Algorithms*. Addison-Wesley Professional, 3rd edition.

[Knuth, 1998] Knuth, D. E. (1998). *The art of computer programming, volume 3:Sorting and searching*. Addison-Wesley Professional, 2nd edition.

4.2. CS211. Teoría de la Computación

[Brookshear, 1993] Brookshear, J. G. (1993). *Teoría de la Computación*. Addison Wesley Iberoamericana.

[Hopcroft and Ullman, 2013] Hopcroft, J. E. and Ullman, J. D. (2013). *Introducción a la Teoría de Autómatas, Lenguajes y Computación*. Pearson Education.

[Linz, 2011] Linz, P. (2011). *An Introduction to Formal Languages and Automata*. Jones & Bartlett Learning, 5th edition.

[Martin, 2010] Martin, J. (2010). *Introduction to Languages and the Theory of Computation*. McGraw-Hill, 4th edition.

[Sipser, 2012] Sipser, M. (2012). *Introduction to the Theory of Computation*. Cengage Learning, 3rd edition.

4.3. CS221. Arquitectura de Computadores

[Parhami, 2005] Parhami, B. (2005). *Computer Architecture: From Microprocessors to Supercomputers*. Oxford Univ. Press, New York.

4.4. CS271. Bases de Datos I

[Celko, 2005] Celko, J. (2005). *Joe Celko's SQL Programming Style*. Elsevier.

[C.J, 2011] C.J, D. (2011). *SQL and Relational Theory: How to Write Accurate SQL Code*. O'Reilly Media.

[Dietrich, 2001] Dietrich, S. W. (2001). *Understanding Relational Database Query Languages, First Edition*. Prentice Hall.

[Elmasri and Navathe, 2004] Elmasri, R. and Navathe, S. B. (2004). *Fundamentals of Database Systems, Fourth Edition*. Addison Wesley.

[Emil Eifrem and Robinson, 2015] Emil Eifrem, J. W. and Robinson, I. (2015). *Graph Databases*. O'Reilly Media, 2nd edition.

[Korth and Silberschatz, 2002] Korth, H. F. and Silberschatz, A. (2002). *Fundamentos de Base de Datos*. McGraw-Hill.

[Ramakrishnan and Gehrke, 2003] Ramakrishnan, R. and Gehrke, J. (2003). *Database Management Systems*. McGraw-Hill, 3rd edition.

[Rob and Coronel, 2004] Rob, P. and Coronel, C. (2004). *Database Systems: Design, Implementation and Management, Sixth Edition*. Morgan Kaufmann.

[Simsion and Witt, 2004] Simsion, G. and Witt, G. (2004). *Data Modeling Essentials, Third Edition*. Morgan Kaufmann.

[Whitehorn and Marklyn, 2001] Whitehorn, M. and Marklyn, B. (2001). *Inside Relational Databases, Second Edition*. Springer.

4.5. CS401. Metodología de la Investigación

[ACM, 2008] ACM (2008). *Digital Libray*. Association for Computing Machinery. http://portal.acm.org/dl.cfm.

[CiteSeer.IST, 2008] CiteSeer.IST (2008). *Scientific Literature Digital Libray*. College of Information Sciences and Technology, Penn State University. http://citeseer.ist.psu.edu.

[IEEE-Computer Society, 2008] IEEE-Computer Society (2008). *Digital Libray*. IEEE-Computer Society. http://www.computer.org/publications/dlib.

4.6. MA202. Métodos Numéricos

[Burden and Faires, 2010] Burden, R. L. and Faires, J. D. (2010). *Numerical Analysis*. Cengage Learning.

[Chapra and Canale, 2015] Chapra, S. C. and Canale, R. P. (2015). *Numerical Methods for Engineers*. McGraw-Hill Education.

4.7. BEI202. Inglés IV

[Cambridge, 2006] Cambridge (2006). *Diccionario Inglés-Espanol Cambridge*. Editorial Oxford.

[MacGrew, 1999] MacGrew, J. (1999). *Focus on Grammar Basic*. Editorial Oxford.

[Soars and John, 2002d] Soars, L. and John (2002d). *American Headway N 2 Student Book*. Editorial Oxford.

Capítulo 5

Quinto Semestre

5.1. CS212. Análisis y Diseño de Algoritmos

[Alsuwaiyel, 1999] Alsuwaiyel, H. (1999). *Algorithms: Design Techniques and Analysis*. World Scientific.

[Cormen et al., 2009] Cormen, T. H., Leiserson, C. E., Rivest, R. L., and Stein, C. (2009). *Introduction to Algorithms, Third Edition*. The MIT Press, 3rd edition.

[Dasgupta et al., 2006] Dasgupta, S., Papadimitriou, C., and Vazirani, U. (2006). *Algorithms*. McGraw-Hill Education.

[Goodrich and Tamassia, 2009] Goodrich, M. T. and Tamassia, R. (2009). *Algorithm Design: Foundations, Analysis and Internet Examples*. John Wiley & Sons, Inc., 2nd edition.

[Kleinberg and Tardos, 2005] Kleinberg, J. and Tardos, E. (2005). *Algorithm Design*. Addison-Wesley Longman Publishing Co., Inc.

[Knuth, 1997] Knuth, D. (1997). *The Art of Computer Programming: Fundamental algorithms*. Number v. 1. Addison-Wesley.

[Rawlins, 1992] Rawlins, G. (1992). *Compared to What?: An Introduction to the Analysis of Algorithms*. Computer Science Press.

[Sedgewick and Flajolet, 2013] Sedgewick, R. and Flajolet, P. (2013). *An Introduction to the Analysis of Algorithms*. Pearson Education.

[Sedgewick and Wayne, 2011] Sedgewick, R. and Wayne, K. (2011). *Algorithms*. Pearson Education.

[Tarjan, 1983] Tarjan, R. E. (1983). *Data Structures and Network Algorithms*. Society for Industrial and Applied Mathematics.

5.2. CS261. Inteligencia Artificial

[De Castro, 2006] De Castro, L. (2006). *Fundamentals of natural computing: basic concepts, algorithms, and applications*. CRC Press.

[Goldberg, 1989] Goldberg, D. (1989). *Genetic Algorithms in Search, Optimization and Machine Learning*. Addison Wesley.

[Koller and Friedman, 2009] Koller, D. and Friedman, N. (2009). *Probabilistic Graphical Models: Principles and Techniques - Adaptive Computation and Machine Learning*. The MIT Press.

[Mitchell, 1998] Mitchell, M. (1998). *An introduction to genetic algorithms*. The MIT press.

[Murphy, 2012] Murphy, K. P. (2012). *Machine Learning: A Probabilistic Perspective*. The MIT Press.

[Nilsson, 2001] Nilsson, N. (2001). *Inteligencia Artificial: Una nueva visión*. McGraw-Hill.

[Ponce-Gallegos et al., 2014] Ponce-Gallegos, J., Torres-Soto, A., tima Quezada Aguilera, Silva-Sprock, A., Flor, E. M., Casali, A., Scheihing, E., Tupac, Y., Soto, M. T., Zapata, F. O., A., J. H., D., C. Z., Vakhnia, N., and Pedreño, O. (2014). *Inteligencia Artificial*. Iniciativa Latinoamericana de Libros de Texto Abiertos (LATIn).

[Russell and Norvig, 2003] Russell, S. and Norvig, P. (2003). *Inteligencia Artifical: Un enfoque moderno*. Prentice Hall.

5.3. CS272. Bases de Datos II

[Burleson, 2004] Burleson, D. K. (2004). *Physical Database Design Using Oracle*. CRC Press.

[Celko, 2005] Celko, J. (2005). *Joe Celko's SQL Programming Style*. Elsevier.

[M. Tamer Ozsu, 1999] M. Tamer Ozsu, P. V. (1999). *Principles of Distributed Database Systems, Second Edition*. Prentice Hall.

[Peter Brusilovsky, 1998] Peter Brusilovsky, Alfred Kobsa, J. V. (1998). *Adaptive Hypertext and Hypermedia, First Edition*. Springer.

[Philip A. Bernstein, 1997] Philip A. Bernstein, E. N. (1997). *Principles of Transaction Processing, First Edition*. Morgan Kaufmann.

[Ramez Elmasri, 2004] Ramez Elmasri, S. B. N. (2004). *Fundamentals of Database Systems, Fourth Edition*. Addison Wesley.

5.4. CS291. Ingeniería de Software I

[Beck, 2002] Beck, K. (2002). *Test-Driven Development: By Example*. Addison-Wesley.

[Chacon and Straub, 2023] Chacon, S. and Straub, B. (2023). *Pro Git*. Apress, 2nd edition. Disponible en https://git-scm.com/book/en/v2.

[Cohn, 2004] Cohn, M. (2004). *User Stories Applied: For Agile Software Development*. Addison-Wesley.

[Cohn, 2009] Cohn, M. (2009). *Succeeding with Agile: Software Development Using Scrum*. Addison-Wesley.

[Evans, 2003] Evans, E. (2003). *Domain-Driven Design: Tackling Complexity in the Heart of Software*. Addison-Wesley.

[Feathers, 2004] Feathers, M. (2004). *Working Effectively with Legacy Code*. Prentice Hall.

[Foundation, 2023] Foundation, F. S. (2023). Bash reference manual. Documentación oficial de Bash.

[Fowler, 2018] Fowler, M. (2018). *Refactoring: Improving the Design of Existing Code*. Addison-Wesley, 2nd edition.

[Fowler, 2019] Fowler, M. (2019). Patterns for managing source code branches. Artículo fundamental sobre flujos modernos.

[Freeman and Pryce, 2009] Freeman, S. and Pryce, N. (2009). *Growing Object-Oriented Software, Guided by Tests*. Addison-Wesley.

[Gamma et al., 1994] Gamma, E., Helm, R., Johnson, R., and Vlissides, J. (1994). *Design Patterns: Elements of Reusable Object-Oriented Software*. Addison-Wesley.

[Howard and LeBlanc, 2006] Howard, M. and LeBlanc, D. (2006). *Writing Secure Code*. Microsoft Press, 2nd edition.

[Kerrisk, 2021] Kerrisk, M. (2021). *The Linux Programming Interface*. No Starch Press.

[Martin, 2017] Martin, R. (2017). *Clean Architecture: A Craftsman's Guide to Software Structure and Design*. Prentice Hall.

[McConnell, 2004] McConnell, S. (2004). *Code Complete: A Practical Handbook of Software Construction*. Microsoft Press, 2nd edition.

[Meszaros, 2007] Meszaros, G. (2007). *xUnit Test Patterns: Refactoring Test Code*. Addison-Wesley.

[Microsoft, 2023] Microsoft (2023). Azure devops labs: Git exercises. Recursos prácticos y tutoriales.

[Newman, 2021] Newman, S. (2021). *Building Microservices: Designing Fine-Grained Systems*. O'Reilly Media, 2nd edition.

[Pressman and Maxim, 2019] Pressman, R. and Maxim, B. (2019). *Software Engineering: A Practitioner's Approach*. McGraw-Hill, 9th edition.

[Robbins and Nelson, 2024] Robbins, A. and Nelson, A. (2024). Gawk: Effective awk programming. Guía oficial de GAWK.

[Sedgewick and Wayne, 2011] Sedgewick, R. and Wayne, K. (2011). *Algorithms*. Addison-Wesley, 4th edition.

[Shostack, 2014] Shostack, A. (2014). *Threat Modeling: Designing for Security.* Wiley.

[Shotts, 2019] Shotts, W. E. (2019). *The Linux Command Line.* No Starch Press, 5th edition.

[Sommerville, 2020] Sommerville, I. (2020). *Software Engineering.* Pearson, 10th edition.

[Torvalds and Hamano, 2024] Torvalds, L. and Hamano, J. (2024). Git documentation. Documentación oficial.

[Wiegers and Beatty, 2013] Wiegers, K. and Beatty, J. (2013). *Software Requirements.* Microsoft Press, 3rd edition.

5.5. CS2S1. Sistemas Operativos

[Anderson and Dahlin, 2014] Anderson, T. and Dahlin, M. (2014). *Operating Systems: Principles and Practice.* Recursive Books, 2nd edition.

[Avi Silberschatz, 2012] Avi Silberschatz, Peter Baer Galvin, G. G. (2012). *Operating System Concepts, 9/E.* John Wiley & Sons, Inc.

[Stallings, 2005] Stallings, W. (2005). *Operating Systems: Internals and Design Principles, 5/E.* Prentice Hall.

[Tanenbaum, 2006] Tanenbaum, A. S. (2006). *Operating Systems Design and Implementation, 3/E.* Prentice Hall.

5.6. BEI203. Inglés V

[Cambridge, 2006] Cambridge (2006). *Diccionario Inglés-Espanol Cambridge.* Editorial Oxford.

[MacGrew, 1999] MacGrew, J. (1999). *Focus on Grammar Basic.* Editorial Oxford.

[Soars and John, 2002g] Soars, L. and John (2002g). *American Headway N 3 Student Book.* Editorial Oxford.

[Soars and John, 2002h] Soars, L. and John (2002h). *American Headway N 3 Teachers Book.* Editorial Oxford.

[Soars and John, 2002i] Soars, L. and John (2002i). *American Headway N 3 Work Book.* Editorial Oxford.

Capítulo 6

Sexto Semestre

6.1. CS231. Redes y Comunicación

[Chayapathi, 2016] Chayapathi, Rajendra; Syed F. Hassan; Shah, P. (2016). *Network Functions Virtualization (NFV) with a Touch of SDN*. Addison-Wesley Professional; 1 edition.

[Kadushin, 2011] Kadushin, C. (2011). *Understanding Social Networks: Theories, Concepts, And Findings*. Oxford University Press, Usa; 1 edition.

[Kurose and Ross, 2013] Kurose, J. and Ross, K. (2013). *Computer Networking: A Top-down Approach*. Always learning. Pearson, 7th edition.

6.2. CS311. Programación Competitiva

[Aziz et al., 2012] Aziz, A., Lee, T., and Prakash, A. (2012). *Elements of Programming Interviews: The Insiders' Guide*. ElementsOfProgrammingInterviews.com.

[Cormen et al., 2009] Cormen, T. H., Leiserson, C. E., Rivest, R. L., and Stein, C. (2009). *Introduction to Algorithms*. MIT Press.

[Halim, 2013] Halim, S. (2013). *Competitive Programming*. Lulu, 3 rd edition.

[Kulikov, 2019] Kulikov, A. S. (2019). *Learning Algorithms Through Programming and Puzzle Solving*. Active Learning Technologies.

[Laaksonen, 2017] Laaksonen, A. (2017). *Guide to Competitive Programming: Learning and Improving Algorithms Through Contests*. Stringer.

[Miguel A. Revilla, 2003] Miguel A. Revilla, S. S. (2003). *Programming Challenges: The Programming Contest Training Manual*. Springer.

6.3. CS312. Estructuras de Datos Avanzadas

[Cuadros-Vargas et al., 2004] Cuadros-Vargas, E., Romero, R. A. F., Mock, M., and Brisaboa, N. (2004). Implementing data structures: An incremental approach. http://socios.spc.org .pe/ecuadros/cursos/pdfs/.

[Gamma et al., 1994] Gamma, E., Helm, R., Johnson, R., and Vlissides, J. M. (1994). *Design Patterns: Elements of Reusable Object-Oriented Software*. Computing Series. Addison-Wesley Professional. ISBN-10: 0201633612.

[Knuth, 2007a] Knuth, D. E. (2007a). *The Art of Computer Programming, Fundamental Algorithms*, volume I. Addison-Wesley, 3rd edition. 0-201-89683-4.

[Knuth, 2007b] Knuth, D. E. (2007b). *The Art of Computer Programming, Sorting and Searching*, volume II. Addison-Wesley, 2nd edition. 0-201-89685-0.

[PGregory Shakhnarovich and Indyk, 2006] PGregory Shakhnarovich, T. D. and Indyk, P. (2006). *Nearest-Neighbor Methods in Learning and Vision: Theory and Practice*. MIT Press, 1st edition. ISBN 0-262-19547-X.

[Samet, 2006] Samet, H. (2006). *Foundations of Multidimensional and Metric Data Structures*. Elsevier/Morgan Kaufmann, illustrated edition.

[Zezula et al., 2007] Zezula, P., Amato, G., Dohnal, V., and Batko, M. (2007). *Similarity Search: The Metric Space Approach*. Springer, 1st edition. ISBN-10: 0387291466.

6.4. CS342. Compiladores

[Aho et al., 2011] Aho, A., Lam, M., Sethi, R., and Ullman, J. D. (2011). *Compilers Principles Techniques And Tools*. Pearson, 2nd edition. ISBN:10-970-26-1133-4.

[Appel, 2002] Appel, A. W. (2002). *Modern compiler implementation in Java*. Cambridge University Press, 2.a edición edition.

[Louden, 2004a] Louden, K. C. (2004a). *Compiler Construction: Principles and Practice*. Thomson.

[Louden, 2004b] Louden, K. C. (2004b). *Lenguajes de Programacion*. Thomson.

[Teufel and Schmidt, 1998] Teufel, B. and Schmidt, S. (1998). *Fundamentos de Compiladores*. Addison Wesley Iberoamericana.

6.5. AI263. Introducción al Aprendizaje de Máquina

[Bishop, 2006] Bishop, C. M. (2006). *Pattern Recognition and Machine Learning*. Springer.

[Chollet, 2021] Chollet, F. (2021). *Deep Learning with Python*. Manning, 2nd edition.

[Goodfellow et al., 2016] Goodfellow, I., Bengio, Y., and Courville, A. (2016). *Deep Learning*. MIT Press.

[Géron, 2022] Géron, A. (2022). *Hands-On Machine Learning with Scikit-Learn, Keras, and TensorFlow*. O'Reilly, 3rd edition.

[Hastie et al., 2009] Hastie, T., Tibshirani, R., and Friedman, J. (2009). *The Elements of Statistical Learning*. Springer, 2nd edition.

[Murphy, 2012] Murphy, K. P. (2012). *Machine Learning: A Probabilistic Perspective*. MIT Press.

6.6. FI201. Física Computacional

[Hecht, 2017] Hecht, E. (2017). *Optics*. Pearson.

[Taylor, 2005] Taylor, J. R. (2005). *Classical Mechanics*. University Science Books.

[Young and Freedman, 2018] Young, H. D. and Freedman, R. A. (2018). *University Physics with Modern Physics*. Pearson.

Capítulo 7

Séptimo Semestre

7.1. CS251. Computación Gráfica

[Hearn and Baker, 1990] Hearn, D. and Baker, P. (1990). *Computer Graphics in C*. Prentice Hall.

[Hughes et al., 2013] Hughes, J. F., Dam, A. V., Mcguire, M., Sklar, D. F., Foley, J. D., Feiner, S. K., and Akeley, K. (2013). *Computer Graphics - Principles and Practice 3rd Edition*. Addison-Wesley.

[Shreiner et al., 2013] Shreiner, D., Sellers, G., Kessenich, J., and Licea-Kane, B. (2013). *OpenGL, Programming Guide, Eighth Edition*. Addison-Wesley.

[Wolff, 2011] Wolff, D. (2011). *OpenGL 4.0 Shading Language Cookbook*. Packt Publishing.

7.2. CS292. Ingeniería de Software II

[Allspaw and Robbins, 2012] Allspaw, J. and Robbins, J. (2012). *Web Operations: Keeping the Data On Time*. O'Reilly Media.

[Beyer et al., 2016] Beyer, B., Jones, C., Petoff, J., and Murphy, N. R. (2016). *Site Reliability Engineering: How Google Runs Production Systems*. O'Reilly Media.

[Beyer et al., 2018] Beyer, B., Murphy, N. R., Rensin, D. K., Kawahara, K., and Thorne, S. (2018). *The Site Reliability Workbook: Practical Ways to Implement SRE*. O'Reilly Media.

[Burns, 2018] Burns, B. (2018). *Designing Distributed Systems: Patterns and Paradigms for Scalable, Reliable Services*. O'Reilly Media.

[Butcher and Farina, 2016] Butcher, M. and Farina, M. (2016). *Docker in Practice*. Manning Publications, 2nd edition.

[Forsgren et al., 2021] Forsgren, N., Humble, J., and Kim, G. (2021). *Accelerate: The Science of Lean Software and DevOps: Building and Scaling High Performing Technology Organizations*. IT Revolution Press.

[Fowler, 2012] Fowler, M. (2012). *Patterns of Enterprise Application Architecture*. Addison-Wesley.

[Hightower et al., 2017] Hightower, K., Burns, B., and Beda, J. (2017). *Kubernetes: Up and Running*. O'Reilly Media.

[Howard and LeBlanc, 2006] Howard, M. and LeBlanc, D. (2006). *Writing Secure Code*. Microsoft Press, 2nd edition.

[Kerrisk, 2010] Kerrisk, M. (2010). *The Linux Programming Interface*. No Starch Press.

[Kim et al., 2016] Kim, G., Humble, J., Debois, P., and Willis, J. (2016). *The DevOps Handbook: How to Create World-Class Agility, Reliability, and Security in Technology Organizations*. IT Revolution Press.

[Kleppmann, 2017] Kleppmann, M. (2017). *Designing Data-Intensive Applications*. O'Reilly Media.

[Lewis and Fowler, 2020] Lewis, J. and Fowler, M. (2020). *Microservices: A Definition of This New Architectural Term*. ThoughtWorks. Available online.

[Love, 2010] Love, R. (2010). *Linux System Programming: Talking Directly to the Kernel and C Library*. O'Reilly Media, 2nd edition.

[Matthias and Kane, 2018] Matthias, K. and Kane, S. (2018). *Docker: Up and Running*. O'Reilly Media, 2nd edition.

[Morris, 2020] Morris, K. (2020). *Infrastructure as Code: Dynamic Systems for the Cloud Age*. O'Reilly Media, 2nd edition.

[Sadalage and Fowler, 2013] Sadalage, P. and Fowler, M. (2013). *NoSQL Distilled: A Brief Guide to the Emerging World of Polyglot Persistence*. Addison-Wesley.

[Shostack, 2014] Shostack, A. (2014). *Threat Modeling: Designing for Security*. Wiley.

[Smith, 2021] Smith, R. (2021). *DevSecOps: A Leader's Guide to Producing Secure Software without Compromising Speed, Agility, and Innovation*. Apress.

[Tanenbaum and Bos, 2015] Tanenbaum, A. and Bos, H. (2015). *Modern Operating Systems*. Pearson, 4th edition.

7.3. CS2H1. Experiencia de Usuario (UX)

[Buxton, 2007] Buxton, B. (2007). *Sketching User Experiences: Getting the Design Right and the Right Design*. Morgan Kaufmann Publishers Inc.

[Dix et al., 2004] Dix, A., Finlay, J., Abowd, G., and Beale, R. (2004). *Human-computer Interaction*. Prentice-Hall, Inc, 3 ed. edition.

[Johnson, 2010] Johnson, J. (2010). *Designing with the Mind in Mind: Simple Guide to Understanding User Interface Design Rules*. Morgan Kaufmann Publishers Inc., 3 ed. edition.

[Leavitt and Shneiderman, 2006] Leavitt, M. and Shneiderman, B. (2006). *Research-Based Web Design & Usability Guidelines*. Health and Human Services Dept.

[Mathis, 2011] Mathis, L. (2011). *Designed for Use: Create Usable Interfaces for Applications and the Web*. Pragmatic Bookshelf.

[Norman, 2004] Norman, D. A. (2004). *Emotional Design: Why We Love (or Hate) Everyday Things*. Basic Book.

[Rogers and Sharp, 2011] Rogers, Y. and Sharp, H. & Preece, J. (2011). *Interaction Design: Beyond Human-Computer Interaction*. John Wiley and Sons Ltd, 3 ed. edition.

[Stone et al., 2005] Stone, D., Jarrett, C., Woodroffe, M., and Minocha, S. (2005). *User Interface Design and Evaluation*. Morgan Kaufmann Series in Interactive Technologies.

[Wigdor and Wixon, 2011] Wigdor, D. and Wixon, D. (2011). *Brave NUI World: Designing Natural User Interfaces for Touch and Gesture*. Morgan Kaufmann Publishers Inc.

7.4. AI264. Aprendizaje Profundo

[Goodfellow et al., 2016] Goodfellow, I., Bengio, Y., and Courville, A. (2016). *Deep Learning*. MIT Press.

[He et al., 2016] He, K., Zhang, X., Ren, S., and Sun, J. (2016). Deep residual learning for image recognition. *CVPR*, pages 770–778.

[Vaswani et al., 2017] Vaswani, A., Shazeer, N., Parmar, N., Uszkoreit, J., Jones, L., Gomez, A., Kaiser, L., and Polosukhin, I. (2017). Attention is all you need. *Advances in Neural Information Processing Systems*, 30.

7.5. BBI101. Biología

[Raven et al., 2017] Raven, P. H., Johnson, G. B., Mason, K. A., Losos, J. B., and Singer, S. R. (2017). *Biology*. McGraw-Hill Education.

[Urry et al., 2017] Urry, L. A., Cain, M. L., Wasserman, S. A., Minorsky, P. V., and Reece, J. B. (2017). *Campbell Biology*. Pearson.

7.6. FG211. Ética Profesional

[ACM, 2018] ACM (2018). Acm code of ethics and professional conduct. Technical report.

[Bostrom, 2014] Bostrom, N. (2014). *Superintelligence: Paths, Dangers, Strategies*. Oxford University Press.

[Committee, 2019] Committee, I. E. (2019). Ethical dilemmas in engineering. Technical report.

[Force, 2020] Force, A. E. T. (2020). Case studies in computing and society. Technical report.

[IEEE, 2020] IEEE (2020). Ieee code of ethics. Technical report.

[Mehrabi et al., 2021] Mehrabi, N., Morstatter, F., Saxena, N., Lerman, K., and Galstyan, A. (2021). A survey on bias and fairness in machine learning. *ACM Computing Surveys*, 54(6).

[Müller, 2021] Müller, V. C. (2021). *Ethics of Artificial Intelligence and Robotics*. Cambridge University Press.

[Voigt and von dem Bussche, 2018] Voigt, P. and von dem Bussche, A. (2018). *The EU General Data Protection Regulation (GDPR): A Practical Guide*. Springer.

Capítulo 8

Octavo Semestre

8.1. CS281. Computación en la Sociedad

[Ediciones, 2009a] Ediciones, D., editor (2009a). *Revista Datamation MC Ediciones*.

[Ediciones, 2009b] Ediciones, D., editor (2009b). *Understanding the Digital Economy*.

[Ediciones, 2010] Ediciones, D., editor (2010). *Financial Times Mastering Information Management*.

[Jr, 2000] Jr, R. M. (2000). *Sistemas de Información Gerencial*. Prentice Hall.

[Laudon and Laudon, 2004] Laudon, K. C. and Laudon, J. P. (2004). *Sistemas de Información Gerencial*. Prentice Hall.

8.2. CS3I1. Seguridad en Computación

8.3. CS3P1. Computación Paralela y Distribuída

[Hager and Wellein, 2010] Hager, G. and Wellein, G. (2010). *Introduction to High Performance Computing for Scientists and Engineers (Chapman and Hall/CRC Computational Science)*. 1st edition.

[Kirk and mei W. Hwu, 2013] Kirk, D. B. and mei W. Hwu, W. (2013). *Programming Massively Parallel Processors: A Hands-on Approach*. Morgan Kaufmann, 2nd edition.

[Matloff, 2014] Matloff, N. (2014). *Programming on Parallel Machines*. University of California, Davis.

[Pacheco, 2011] Pacheco, P. S. (2011). *An Introduction to Parallel Programming*. Morgan Kaufmann, 1st edition.

[Quinn, 2003] Quinn, M. J. (2003). *Parallel Programming in C with MPI and OpenMP*. McGraw-Hill Education Group, 1st edition.

[Sanders and Kandrot, 2010] Sanders, J. and Kandrot, E. (2010). *CUDA by Example: An Introduction to General-Purpose GPU Programming*. Addison-Wesley Professional, 1st edition.

8.4. CS402. Proyecto de tesis 1

[ACM, 2008] ACM (2008). *Digital Libray*. Association for Computing Machinery. http://portal.acm.org/dl.cfm.

[CiteSeer.IST, 2008] CiteSeer.IST (2008). *Scientific Literature Digital Libray*. College of Information Sciences and Technology, Penn State University. http://citeseer.ist.psu.edu.

[IEEE-Computer Society, 2008] IEEE-Computer Society (2008). *Digital Libray*. IEEE-Computer Society. http://www.computer.org/publications/dlib.

8.5. FG106. Teatro

[Majorana, 1958] Majorana, A. (1958). *El arte de hablar en publico*. La España Moderna.

[Pavis, 1998] Pavis, P. (1998). *Diccionario del Teatro*. Edit. Piados BA.

8.6. EX301. Actividades Extracurriculares

[ACM, 2019] ACM (2019). Guidelines for extracurricular activities in computing. Technical report.

[Commission, 2022] Commission, A. C. A. (2022). Abet criteria for student professional development. Technical report.

8.7. AI268. Visión Computacional

[Gonzalez and Woods, 2018] Gonzalez, R. and Woods, R. (2018). *Digital Image Processing*. Pearson, 4th edition.

[Hartley and Zisserman, 2004] Hartley, R. and Zisserman, A. (2004). *Multiple View Geometry in Computer Vision*. Cambridge University Press.

[He et al., 2017] He, K., Gkioxari, G., Dollár, P., and Girshick, R. (2017). Mask r-cnn. *IEEE ICCV*.

[Szeliski, 2010] Szeliski, R. (2010). *Computer Vision: Algorithms and Applications*. Springer.

8.8. CS391. Ingeniería de Software III

[Amazon AWS AI, 2024] Amazon AWS AI (2024). *Building Reliable AI Systems on AWS*. Amazon Press.

[Beyer et al., 2018] Beyer, B., Murphy, N. R., Rensin, D. K., Kawahara, K., and Thorne, S. (2018). *The Site Reliability Workbook: Practical Ways to Implement SRE*. O'Reilly Media.

[Bommasani et al., 2021] Bommasani, R., Hudson, D. A., Adeli, E., Altman, R., Arora, S., von Arx, S., Bernstein, M. S., Bohg, J., Bosselut, A., Brunskill, E., et al. (2021). On the opportunities and risks of foundation models. *arXiv preprint*, arXiv:2108.07258.

[Chase, 2024] Chase, H. (2024). *LangChain for LLM Application Development: From Prompt Engineering to Agent Orchestration*. O'Reilly Media.

[Engineering, 2024] Engineering, S. (2024). *Backstage: Building an Internal Developer Portal*. O'Reilly Media.

[Foundation, 2024] Foundation, L. (2024). *SLSA Framework v1.0: Supply-chain Levels for Software Artifacts*. Linux Foundation.

[Google AI Research, 2024] Google AI Research (2024). *Evaluating AI-Generated Code: Benchmarks and Methodologies*. Google Press.

[Kim et al., 2023] Kim, G., Spear, S., and Forsgren, N. (2023). *The Platform Engineering Playbook: Building Internal Developer Platforms*. IT Revolution Press.

[Meta AI Research, 2024] Meta AI Research (2024). *Quality Assurance for AI-Native Systems*. Meta Press.

[Microsoft Research, 2024] Microsoft Research (2024). *AI Software Development: From Copilot to Autonomous Agents*. Microsoft Press.

[Ng and Chase, 2024] Ng, A. and Chase, H. (2024). *AI-Native Software Engineering: Building Systems with Autonomous Agents*. DeepLearning.AI Press.

[of Standards and Technology, 2024] of Standards, N. I. and Technology (2024). *AI Risk Management Framework and Secure AI Supply Chain*. NIST.

[Team, 2025] Team, A. R. (2025). *Building AI-Native Applications: Principles and Practices*. Anthropic.

[Team, 2024] Team, O. R. (2024). *GPT Engineering: Best Practices for Production Systems*. OpenAI.

[Weidinger et al., 2021] Weidinger, L., Mellor, J., Rauh, M., Griffin, C., Uesato, J., Huang, P.-S., Cheng, M., Glaese, M., Balle, B., Kasirzadeh, A., et al. (2021). Ethical and social risks of harm from language models. *arXiv preprint*, arXiv:2112.04359.

[Wu et al., 2023] Wu, Q., Bansal, G., Zhang, J., Wu, Y., Zhang, S., Zhu, E., Li, B., Jiang, L., Zhang, X., and Wang, C. (2023). Autogen: Enabling next-gen llm applications via multi-agent conversation. *arXiv preprint*, arXiv:2308.08155.

[Yao et al., 2022] Yao, S., Zhao, J., Yu, D., Du, N., Shafran, I., Narasimhan, K., and Cao, Y. (2022). React: Synergizing reasoning and acting in language models. *arXiv preprint*, arXiv:2210.03629.

8.9. CS393. Sistemas de Infomación

[Laudon and Laudon, 2017] Laudon, K. C. and Laudon, J. P. (2017). *Management Information Systems: Managing the Digital Firm*. Pearson, 15th edition.

[Pressman and Maxim, 2015] Pressman, R. S. and Maxim, B. (2015). *Software Engineering: A Practitioner's Approach*. McGraw-Hill, 8th edition.

[Sommerville, 2017] Sommerville, I. (2017). *Software Engineering*. Pearson, 10th edition.

Capítulo 9

Noveno Semestre

9.1. CS370. Big Data

[Damji et al., 2023] Damji, J., Wenig, B., Das, T., and Lee, D. (2023). *Learning Spark: Lightning-Fast Data Analytics*. O'Reilly, 2nd edition. Spark 3.5 with Python/SQL examples.

[Kleppmann, 2017] Kleppmann, M. (2017). *Designing Data-Intensive Applications*. O'Reilly. Architecture patterns for Big Data.

[Marz and Warren, 2015] Marz, N. and Warren, J. (2015). *Big Data: Principles and Best Practices*. Manning. Lambda architecture deep dive.

[Perrin, 2023] Perrin, J.-G. (2023). *Spark in Action*. Manning, 2nd edition. Practical Spark applications.

[Robinson et al., 2015] Robinson, I., Webber, J., and Eifrem, E. (2015). *Graph Databases*. O'Reilly. Graph processing fundamentals.

[White, 2021] White, T. (2021). *Hadoop: The Definitive Guide*. O'Reilly, 5th edition. Covers Hadoop 3 and YARN.

[Zaharia et al., 2016] Zaharia, M., Xin, R. S., Wendell, P., Das, T., Armbrust, M., Dave, A., Meng, X., Rosen, J., Venkataraman, S., Franklin, M. J., Ghodsi, A., Gonzalez, J., Shenker, S., and Stoica, I. (2016). Apache spark: A unified engine for big data processing. *Communications of the ACM*, 59(11):56–65.

9.2. CS400. Prácticas Pre-profesionales

[de Educación de la ACM, 2022] de Educación de la ACM, C. (2022). Guía para prácticas pre-profesionales exitosas en ciencia de la computación. Technical report, Association for Computing Machinery. Documento oficial con estándares para prácticas en computación.

[Society, 2021] Society, I. C. (2021). *Prácticas Profesionales en Computación: Ética y Gestión*. IEEE Press. Manual de buenas prácticas para entornos laborales en TI.

9.3. CS403. Proyecto de tesis 2

[ACM, 2008] ACM (2008). *Digital Libray*. Association for Computing Machinery. http://portal.acm.org/dl.cfm.

[CiteSeer.IST, 2008] CiteSeer.IST (2008). *Scientific Literature Digital Libray*. College of Information Sciences and Technology, Penn State University. http://citeseer.ist.psu.edu.

[IEEE-Computer Society, 2008] IEEE-Computer Society (2008). *Digital Libray*. IEEE-Computer Society. http://www.computer.org/publications/dlib.

9.4. AI365. Modelos Generativos Avanzados en IA

[Goodfellow et al., 2014] Goodfellow, I., Pouget-Abadie, J., Mirza, M., Xu, B., Warde-Farley, D., Ozair, S., Courville, A., and Bengio, Y. (2014). Generative adversarial networks. In *NeurIPS*.

[Rombach et al., 2022] Rombach, R., Blattmann, A., Lorenz, D., Esser, P., and Ommer, B. (2022). High-resolution image synthesis with latent diffusion models. *CVPR*.

[Sohl-Dickstein et al., 2023] Sohl-Dickstein, J., Song, Y., and Ermon, S. (2023). *Diffusion Models: A Comprehensive Practical Guide*. AI Press.

9.5. CB309. Bioinformática

[Aluru, 2006] Aluru, S., editor (2006). *Handbook of Computational Molecular Biology*. Computer and Information Science Series. Chapman & Hall, CRC, Boca Raton, FL.

[Clote and Backofen, 2000] Clote, P. and Backofen, R. (2000). *Computational Molecular Biology: An Introduction*. John Wiley & Sons Ltd. 279 pages.

[Durbin et al., 1998] Durbin, R., Eddy, S., Krogh, A., and Mitchison, G. (1998). *Biological Sequence Analysis: Probabilistic Models of Proteins and Nucleic Acids*. Cambridge University Press.

[Krogh et al., 1994] Krogh, A., Brown, M., Mian, I. S., Sjölander, K., and Haussler, D. (1994). Hidden markov models in computational biology, applications to protein modeling. *J Mol. Biol*, 235:1501–1531.

[Pevzner, 2000] Pevzner, P. A. (2000). *Computational Molecular Biology: an Algorithmic Approach*. The MIT Press, Cambridge, Massachusetts.

[Setubal and Meidanis, 1997] Setubal, J. C. and Meidanis, J. (1997). *Introduction to computational molecular biology*. Boston: PWS Publishing Company.

9.6. CS351. Tópicos en Computación Gráfica

[Haines and Akenine-Möller, 2023] Haines, E. and Akenine-Möller, T. (2023). The state of ray tracing in 2023. *Journal of Computer Graphics Techniques*, 11(2).

[Karis and Games, 2023] Karis, B. and Games, E. (2023). Nanite and lumen technical deep dive. *Unreal Engine Whitepapers*. Virtualized geometry and global illumination in UE5.

[Lottes and NVIDIA, 2022] Lottes, T. and NVIDIA (2022). Rtx accelerated wavelet noise. In *SIGGRAPH Advances in Real-Time Rendering*. Procedural texturing with RT cores.

[Marrs et al., 2021] Marrs, A., Shirley, P., and Wald, I. (2021). *Ray Tracing Gems II*. Apress. Advanced RT techniques with DLSS and hybrid rendering.

[Pereira and Microsoft, 2023] Pereira, N. and Microsoft (2023). Directx raytracing documentation. Technical report, Microsoft. Official DXR programming guide.

[Yan and Research, 2023] Yan, L. and Research, G. (2023). Neural radiance fields for real-time view synthesis. *ACM Transactions on Graphics*, 42(4). Real-time NeRF optimizations.

9.7. CS353. Computación Cuántica

[IBM, 2023] (2023). Ibm quantum hardware roadmap. Technical report, IBM Research.

[Möttönen and Vartiainen, 2023] Möttönen, M. and Vartiainen, J. (2023). *Quantum Computing: From Qubits to Quantum Machines*. Springer.

[Nielsen and Chuang, 2010] Nielsen, M. A. and Chuang, I. L. (2010). *Quantum Computation and Quantum Information*. Cambridge University Press. Texto clásico para fundamentos teóricos.

[Preskill, 2018] Preskill, J. (2018). Lecture notes on quantum computation.

[Team, 2019] Team, G. A. Q. (2019). Quantum supremacy using a programmable superconducting processor. *Nature*, 574.

[Team, 2023] Team, I. Q. (2023). *Qiskit Textbook*. Guía práctica con ejemplos en Qiskit.

9.8. AI369. Robótica

[LaValle, 2006] LaValle, S. M. (2006). *Planning Algorithms*. Cambridge University Press.

[Murphy, 2000] Murphy, R. R. (2000). *Introduction to AI Robotics*. MIT Press.

[Siciliano et al., 2009] Siciliano, B., Sciavicco, L., Villani, L., and Oriolo, G. (2009). *Robotics: Modelling, Planning and Control*. Springer.

[Thrun et al., 2005] Thrun, S., Burgard, W., and Fox, D. (2005). *Probabilistic Robotics*. MIT Press.

9.9. CS392. Tópicos en Ingeniería de Software

[Pressman and Maxim, 2015] Pressman, R. S. and Maxim, B. (2015). *Software Engineering: A Practitioner's Approach*. McGraw-Hill, 8th edition.

[Sommerville, 2017] Sommerville, I. (2017). *Software Engineering*. Pearson, 10th edition.

9.10. CS3P3. Internet de las Cosas

[Kirk and mei W. Hwu, 2013] Kirk, D. B. and mei W. Hwu, W. (2013). *Programming Massively Parallel Processors: A Hands-on Approach*. Morgan Kaufmann, 2nd edition.

[Matloff, 2014] Matloff, N. (2014). *Programming on Parallel Machines*. University of California, Davis.

[Pacheco, 2011] Pacheco, P. S. (2011). *An Introduction to Parallel Programming*. Morgan Kaufmann, 1st edition.

[Quinn, 2003] Quinn, M. J. (2003). *Parallel Programming in C with MPI and OpenMP*. McGraw-Hill Education Group, 1st edition.

[Sanders and Kandrot, 2010] Sanders, J. and Kandrot, E. (2010). *CUDA by Example: An Introduction to General-Purpose GPU Programming*. Addison-Wesley Professional, 1st edition.

Capítulo 10

Décimo Semestre

10.1. CS3P2. Cloud Computing

[Burns and Beda, 2023] Burns, B. and Beda, J. (2023). *Kubernetes: Up and Running*. O'Reilly, 3rd edition.

[Center, 2023] Center, I. C. A. (2023). Hybrid cloud strategies. Technical report, IBM.

[Cloud, 2023] Cloud, G. (2023). Serverless architectures with cloud functions. Technical report, Google Cloud.

[Coulouris et al., 2011] Coulouris, G., Dollimore, J., Kindberg, T., and Blair, G. (2011). *Distributed Systems: Concepts and Design*. Addison-Wesley, 5th edition.

[Damji et al., 2023] Damji, J., Wenig, B., Das, T., and Lee, D. (2023). *Learning Spark: Lightning-Fast Data Analytics*. O'Reilly, 2nd edition.

[Karau and Konwinski, 2018] Karau, H. and Konwinski, A. (2018). *Learning Spark*. O'Reilly.

[Microsoft, 2023] Microsoft (2023). Containerized applications on azure. Technical report, Microsoft Docs.

[Services, 2023] Services, A. W. (2023). Aws well-architected framework. Technical report, AWS. Official cloud best practices guide.

[Villegas and Cresswell, 2023] Villegas, D. and Cresswell, M. (2023). *Cloud Native Architectures*. Packt. Covers multi-cloud patterns with case studies.

10.2. CS404. Taller de Investigación

[ACM, 2008] ACM (2008). *Digital Libray*. Association for Computing Machinery. http://portal.acm.org/dl.cfm.

[CiteSeer.IST, 2008] CiteSeer.IST (2008). *Scientific Literature Digital Libray*. College of Information Sciences and Technology, Penn State University. http://citeseer.ist.psu.edu.

[IEEE-Computer Society, 2008] IEEE-Computer Society (2008). *Digital Libray*. IEEE-Computer Society. http://www.computer.org/publications/dlib.

10.3. AI367. Tópicos en Inteligencia Artificial

[Goldberg, 1989] Goldberg, D. E. (1989). *Genetic Algorithms in Search, Optimization and Machine Learning*. Addison-Wesley Publishing Co., Reading, Massachusetts.

10.4. AI368. Computación Evolutiva

[Authors, 2022] Authors, V. (2022). Evolutionary computation in industry. *Nature Reviews*, 3. Aplicaciones industriales modernas.

[Beyer, 2001] Beyer, H.-G. (2001). *The Theory of Evolution Strategies*. Springer. Fundamentos matemáticos.

[Eiben and Smith, 2015] Eiben, A. and Smith, J. (2015). *Introduction to Evolutionary Computing*. Springer. Visión general actualizada.

[Goldberg, 2018] Goldberg, D. E. (2018). *Algoritmos Genéticos*. Addison-Wesley. Clásico en algoritmos genéticos.

[Team, 2023] Team, D. (2023). Documentación de deap. Framework para computación evolutiva en Python.

10.5. FG350. Liderazgo y Desempeño

[Anthony D' Souza,] Anthony D' Souza, S. *Descubre tu Liderazgo*. Editorial Sal Terrae.

[Cardona and Lombardi, 2002] Cardona, P. and Lombardi, P. G. (2002). *Cómo desarrollar las Competencias de Liderazgo*. PAD Lima- Perú, Tercera Edición.

[Cardona and Peña,] Cardona, P. and Peña, C. R. *Dirección por misiones: Cómo generar empresas de alto rendimiento*.

[Cardona and Wilkinson, 2009] Cardona, P. and Wilkinson, H. (2009). *Creciendo como Líder*. Ediciones Universidad de Navarra S.A (EUNSA), Primera Edición.

[Chinchilla and Moragas, 2007] Chinchilla, N. and Moragas, M. (2007). *Dueños de Nuestro Destino*. Editorial Ariel.

[Dianine-Havard, 2009] Dianine-Havard, A. (2009). *Perfil del Líder. Hacia un Liderazgo Virtuoso*. Ediciones Urano S.A.

[Ferreiro and Alcázar, 2009] Ferreiro, P. and Alcázar, M. (2009). *Gobierno de Personas en la Empresa*. Ediciones Universidad de Navarra EUNSA.

[Ginebra and Serrabou, 2010] Ginebra, G. and Serrabou, G. G. (2010). *Gestión de incompetentes. Libros de Cabecera*.

[Goleman, 2012] Goleman, D. (2012). *Inteligencia emocional*. Editorial Kairós.

[Hawkins, 2012] Hawkins, P. (2012). *Coaching y liderazgo de equipos: coaching para un liderazgo con capacidad de transformación*. Ediciones Granica.

[Hersey et al., 1998] Hersey, P., Blanchard, K. H., and Johnson, D. E. (1998). *Administración del comportamiento organizacional: liderazgo situacional*.

[Huete, 2008] Huete, L. (2008). *Construye tu Sueño*. LID Editorial Empresarial.

[Hunsaker, 2010] Hunsaker, P. (2010). *El nuevo arte de gestionar equipos: Un enfoque actual para guiar y motivar con éxito*.