DATASCI 221: Modern Data Applications

Master of Information and Data Science (MIDS)

Spring 2024

Course Designer and Instructor: **Joyce Shen**

Course Description

This is a multi-topic and multidisciplinary course that explores contemporary and futuristic topics that are intertwined with data and data applications. This course synthesizes data and AI research, business and enterprise technology strategy, business and data business model, market analysis, leadership into one class. Students are required to participate in weekly sessions and write response pieces as well as a final paper and presentation studying one defining data application or emerging technology in ML/AI end-to-end. Students taking this course will further broaden and deepen their holistic understanding of current topics in data applications and will gain the skills to systematically and rigorously analyze any current data application or emerging applications in various industries. This course will include a leadership module to cultivate long-term strategic, management, and analytical insights and capabilities. Equally important, this course trains students who aspire to be data science leaders who can effectively communicate, collaborate, innovate alongside their business and non-technical stakeholders in any organizational environment. This is the course for you if you want to develop a deep understanding on both the technical side and the applied side in various contemporary and emerging machine learning and artificial intelligence domains and markets, and how the modern applications impact data science practitioners and the general population.

Course Format

- Two live lectures / synchronous sessions each week. Each session is one and a half hours.
- No asynchronous lecture content.

- Live sessions will include lectures, discussions of readings and assignments, guest speakers, learning activities.

Prerequisites

- DATASCI 205: Fundamentals of Data Engineering or DATASCI 207: Applied Machine Learning
- This course can be taken simultaneously with DATASCI 205 and DATASCI 207
- Cannot be taken simultaneously with DATASCI 210: Synthetic Capstone

Learning Objectives

By the completion of this course, students will be able to:

1. Develop strategic and business thinking in various data science domains.
2. Understand "modern data stacks" and how to manage data as an asset in an organization
3. Evaluate data science applications and opportunities across a number of situations and domains.
4. Learn a set of qualitative models and frameworks to analyze any modern data application
5. Anticipate the opportunities and problems likely to be encountered in any given data application as business requirements and secular trends evolve
6. Create a strategic business case for a new or emerging data application or data science / machine learning use case.

Assessments and Grading

- **Reading Notes and 3 Executive Briefings (30%)** - one page, font size 12. The grading for each deliverable is on a scale of 0, 50, 90, 100.
    - Complete Reading Notes
    - After week 4 (after "Data as an Asset in an Organization")
    - After week 8 (after "Application of Data Science in Climate Technologies ")
    - After week 12 (after "Application of Data Science in Robotics and Autonomous Systems")
    - Complete Technical Paper Question Grids in Week 7, Week 9, Week 11, Week 12

- **Participation / discussion in class (30%)**
  - Attendance (*2 excused absences*)
  - Class and Group Discussions

- **A written final and individual short presentation (40%)**
  - Part I: Each student will be given a situational prompt and then apply frameworks learned in class to evaluate the data science strategy relevant to C-level stakeholders. **(20%)**
  - Part II: Based on a contemporary case prompt, students apply critical thinking and analyze a set of questions. **(20%)**
  - Students will then provide a short verbal presentation in class for either Part I <u>or</u> Part II (instructor will provide which part of the final assignment that requires short verbal presentation)

General Grading Philosophy

The course will be graded on an absolute scale, and the grades will not be fitted to a specific curve. This is a graduate-level course, and we trust that different students will have varying levels of interests in the different subjects in the course. As such, the grading scheme is designed to acknowledge this intellectual diversity.

Baseline grading range for this course is:
A for 93 or above,
A– for 90 or above,
B+ for 87 or above,
B for 83 or above,
B– for 80 or above,
C+ for 77 or above,
C for 73 or above,
C– for 70 and above,
D+ for 67 and above,
D for 63 and above,
D– for 60 and above, and
F for 59 and below.

Key Dates:

Academic Calendar:
https://www.ischool.berkeley.edu/intranet/students/mids-mics/calendar

Weekly Schedule

Week 1: Modern Data Applications - Introduction & Leadership
- Overview of the course and expectations
- Data management maturity model
- Develop the ability to analyze emerging technologies in machine learning & AI and beyond
- A survey of modern data systems and applications
- Establish understanding of the roles of CDO, CIO, CTO, CFO, P&L Owner and their responsibilities and tradeoffs in small and large organizations, and how to communicate to these stakeholders
- Reading for Week 1.1:
    - Berinado, Scott. 2019. Data Science and the Art of Persuasion. HBS. (study.net)
    - Keshav, S. 2016. How to Read a Paper. (pdf in BCourses)
    - How to read a paper.pdf
    - Karamouzis, Frances et al. 2023. Understanding Gartner's Hype Cycles. Gartner. https://www.gartner.com/document/code/793868?ref=ddisp&refval=793868 (link in bCourses)
    - Chandrasekaran, Arun. Hype Cycle for Emerging Technologies. 2023. Gartner. https://www.gartner.com/interactive/hc/4597499?ref=hp-discovery&reqid=34bb6330-442d-4e73-8ed7-81c86f1d9d5b (link in bCourses)
    - Jaffri, Afraz. 2023. Hype Cycle for Artificial Intelligence, 2023. Gartner. https://www.gartner.com/interactive/hc/4543699?ref=solrAll&refval=374932015
    - Rosenbaum, Aaron 2023. Hype Cycle for Data Management, 2023. Gartner. https://www.gartner.com/interactive/hc/4573399?ref=solrAll&refval=374931541 (link in bCourses)
- Readings for Week 1.2:
    - Data Management Maturity. Gartner. https://www.gartner.com/document/code/804437?ref=ddisp&refval=804437 (link in bCourses)
    - Datar, Srikant M. et al. 2020. Applying Data Science and Analytics at P&G. HBS. (study.net)
    - Topham, Darren et al. 2022. Scaling Innovation Beyond Pretty Prototypes. Gartner.

https://www.gartner.com/document/4014963?ref=algorightrec&refval=4019156 (link in bCourses)
- Matveeva, Sophia. 2022. Coding Isn't a Necessary Leadership Skill But Digital Literacy Is. HBR (link in bCourses)

Week 2: The Modern Data Stacks Part I
- Establish understanding of modern data stacks
- Establish understanding of trends and emerging players defining new categories of data science (e.g., ML Stack, MLOps, Data Fabric)
- Reading for week 2.1
    - The State of Data Quality Solutions: Augment, Automate and Simplify. Gartner. https://www.gartner.com/document/code/740836????ref=ihc-interactivesection-hc (link in bCourses)
    - Magic Quadrant for Data Quality Solutions. Gartner. https://www.gartner.com/document/4020719?ref=algorightrec&refval=4012528 (link in bCourses)
    - Critical Capabilities for Data Integration Tools. Gartner. https://www.gartner.com/document/4998131?ref=ki-9947 (link in bCourses)
    - Kreuzberger, Dominik et al. Machine Learning Operations (MLOps): Overview, Definition, and Architecture. https://arxiv.org/pdf/2205.02302.pdf (link in bCourses)
- Reading for Week 2.2
    - Bojinov, Iavor et al. 2021. Data Science at the Warriors. HBS. (study.net)
    - Runge, Julian et al. 2023. A New Gold Standard for Digital Ad Measurement? HBR. https://hbr.org/2023/03/a-new-gold-standard-for-digital-ad-measurement (link in bCourses)
    - Runge, Julian et al. 2021. Apple Is Changing How Digital Ads Work. Are Advertisers Prepared? HBR (Link)

Week 3: The Modern Data Stacks Part II
- Review examples of modern data stacks being used in the industry
- Students demonstrate the ability to develop a "data stack" view for a given scenario or industry
- Guest Speaker
- Reading for 3.1

- What is Data Fabric Design? Gartner. https://www.gartner.com/document/code/787121?ref=ddisp&refval=787121 (link in bCourses)
- AWS and Amazon SageMaker (A), (B), and (C): The Commercialization of Machine Learning Services (study.net)
-
- Reading for 3.2
    - Use Gartner's MLOps Framework to Operationalize Machine Learning Projects. 2023. Gartner https://www.gartner.com/document/code/801513?ref=ddisp&refval=801513 (link in bCourses)
    - A CTO's Guide to the Generative AI Technology Landscape. 2023. Gartner. https://www.gartner.com/document/4750131?ref=solrAll&refval=389873058& (link in bCourses)
    - Elliott, Bern et al. 2023. Applying AI — A Framework for the Enterprise. Gartner. https://www.gartner.com/document/code/775831?ref=dochist (link in bCourses)
    - Dekate, Chirag et al. Applying AI — Techniques and Infrastructure. Gartner. https://www.gartner.com/document/4300099?ref=solrAll&refval=365518563 (link in bCourses)
    - Srinivasan, Suraj et al. 2021. Burning Glass Technologies: From Data to Product. HBS. (study.net)

Week 4: Data as an asset in an organization
- Establish understanding the data value chain - from data creation to data need as well as data governance
- Establish understanding of approaches of valuing data assets
- Reading Week 4.1:
    - Davenport, Thomas H et al. 2020. Your Organization Needs a Proprietary Data Strategy. HBS. (study.net)
    - How to Succeed with Data Classification using Modern Approaches. Gartner. https://www.gartner.com/document/4012843?ref=solrAll&refval=335553181 (link in bCourses)
    - Applied Infonomics: 7 Practices for Chief Data Officers to Monetize Information Assets. Gartner.

https://www.gartner.com/document/code/720225?????????ref=ihc-interactivesection-hc (link in bCourses)
- - Predicts 2024: Data and Analytics Governance Requires a Reset. Gartner. https://www.gartner.com/document/5049831?ref=ki-10527 (link in bCourses)
- Reading Week 4.2:
  - - Meister, Darren et al. 2021. McCormick & Co.: Deploying Artificial Intelligence in New Product Development. HBS. (study.net)
  - - Isik, Oyku et al. 2022. Mastercard's ethical approach to governing AI. HBS (study.net)
- Assignment due: Written report #1 based on prompt

Week 5: **Data as an asset in an organization**
- Data Governance models
- Consider the value of data and data used for public good
- Guest Speaker
- Reading Week 5.1:
  - - Connected Governance Drives Adoption of Data and Analytics Governance Platforms, Gartner. https://www.gartner.com/document/4012530?ref=solrAll&refval=335553266 (link in bCourses)
  - - Which Data Is Master Data? Gartner. https://www.gartner.com/document/code/720216 (link in bCourses)
  - - Who Owns Master Data? Gartner. https://www.gartner.com/document/code/766463?ref=ddisp&refval=766463 (link in bCourses)
  - - Kristal, Murat et al. 2018. TD Bank Group: Building an Effective Enterprise Data Management Policy. HBS. (study.net)
- Reading Week 5.2:
  - - Lakhani, Karim et al. 2021. Customer-Centric Design with Artificial Intelligence: Commonwealth Bank. HBS (study.net)
  - - Gupta, Sunil et al. 2015. Apple Pay. HBR (study.net)
  - - Ghorbani, A et al. 2019. What is your data worth? Equitable Valuation of Data. https://arxiv.org/pdf/1904.02868.pdf (link in bCourses)
  - - Miller, Katherine. 2021. Quantifying the Value of Data. https://hai.stanford.edu/news/quantifying-value-data (link in bCourses)

Week 6: Analyzing Data Applications
- Learn frameworks of analyzing data applications and evaluate representative applications

- Practice researching and develop a thesis / perspective on an unfamiliar data application
- Reading for Week 6.1:
    - Porter, Michael. The Five Competitive Forces that Shape Strategy. HBR. (study.net)
    - Yoffie David B et al. 2022. The Voice War Continues: Hey Google vs. Alexa vs. Siri in 2022. HBS. (study.net)
    - AI for Defense: https://www.boozallen.com/markets/defense/ai-for-military.html (link in bCourses)

- Reading for Week 6.2:
    - Almquist, Eric. et al. 2016. The Elements of Value. HBR. (study.net)
    - Almquist, Eric. et al. 2018. The Elements of Value. HBR. (study.net)
    - Youngme Moon. Duolingo: Teaching Languages to the Masses. HBS. (study.net)
    - Noha Tohamy et al. 2022. Infographic: Artificial Intelligence Use-Case Prism for Supply Chain. Gartner. https://www.gartner.com/document/code/775510?ref=ddisp&refval=775510 (link in bCourses)
    - Miclaus, Radu et al. Innovation Guide for Generative AI Technologies. 2023. Gartner. https://www.gartner.com/document/4584399?ref=hp-discovery&reqid=34bb6330-442d-4e73-8ed7-81c86f1d9d5b (link in bCourses)

Week 7: Application of Data Science in Climate Technologies
- Develop understanding of relevant academic research in the field
- Guest Speaker
- Reading 7.1:
    - Hellstern, Tomet al. 2021. Innovating to net zero: An executive's guide to climate technology. McKinsey https://www.mckinsey.com/capabilities/sustainability/our-insights/innovating-to-net-zero-an-executives-guide-to-climate-technology (if you want to read more, here is a link to more readings on the topic)
    - Learning skillful medium-range global weather forecasting. (link in bCourses)
    - Gao, Zhihan et al. 2022. Earthformer: Exploring Space-Time Transformers for Earth System Forecasting. https://arxiv.org/pdf/2207.05833.pdf (link in bCourses)
- Reading 7.2:

- Serr, Gaetan et al. 2022. Reinforcement learning for energies of the future and carbon neutrality: a Challenge Design. https://arxiv.org/pdf/2207.10330.pdf (link in bCourses)
- Donti, & Kolter, J. Z. (2021). Machine Learning for Sustainable Energy Systems. Annual Review of Environment and Resources, 46(1), 719–747. https://doi.org/10.1146/annurev-environ-020220-061831
- Iyer, Akshay et al. 2022. Learning to identify cracks on wind turbine blade surfaces using drone-based inspection images. https://arxiv.org/pdf/2207.11186.pdf (link in bCourses)

Week 8: Application of Data Science in Climate Technologies
- Review data applications addressing climate challenges
- Examine one or two companies in the space
- Discuss challenges and opportunities in data-centric climate technologies
- Reading 8.1
    - Anupindi, Ravi et al. 2021. SkySpecs: A new horizon for wind energy. HBS. (study.net)
    - Podcast: Mining the Data for Cobalt https://a16z.simplecast.com/episodes/mining-data-cobalt-technology-liJakDQd
    - Paul Voosen. 2023. "It's just mind boggling." More than 19,000 undersea volcanoes discovered. Science. https://www.science.org/content/article/it-s-just-mind-boggling-more-19-000-undersea-volcanoes-discovered (link in bCourses)

- Reading 8.2
    - Rahel, F.J. (2022), Managing Freshwater Fish in a Changing Climate: Resist, Accept, or Direct. Fisheries, 47: 245-255. https://doi-org.libproxy.berkeley.edu/10.1002/fsh.10726 (link in bCourses)
    - Goldberg Ray A et al. 2021. Nestlé: The World's Largest Food Company Confronts Climate Change. HBS. (study.net)
    - *Optional*: Lecture 3, Section 3 only - Rose, Brian. A Taxonomy of climate models https://brian-rose.github.io/ClimateLaboratoryBook/courseware/climate-system-models.html (link in bCourses)
- Assignment due: Written report #2 based on prompt

Week 9: Application of Data Science in Healthcare and Computational Biology
- Develop understanding of relevant academic research in the field
- Guest speaker
- Reading 9.1:

- Kavalci, E., Hartshorn, A. Improving clinical trial design using interpretable machine learning based prediction of early trial termination. Sci Rep 13, 121 (2023). https://doi.org/10.1038/s41598-023-27416-7
- Zhang A, Xing L, Zou J, Wu JC. 2022. Shifting machine learning for healthcare from development to deployment and from models to data. Nature Biomedical Engineering. https://doi.org/10.1038/s41551-022-00898-y (link in bCourses)
- Porter, Michael E et al. 2019. Martini Klinik: Prostate Cancer Care 2019. HBS. (study. net)
- Reading 9.2:
    - A catalogue of genetic mutations to help pinpoint the cause of diseases. 2023. https://deepmind.google/discover/blog/a-catalogue-of-genetic-mutations-to-help-pinpoint-the-cause-of-diseases/ (link in Bcourses)
    - Bray, Mark-Anthony et al. "Cell Painting, a High-Content Image-Based Assay for Morphological Profiling Using Multiplexed Fluorescent Dyes." Nature protocols 11.9 (2016): 1757–1774. Web. LINK
    - Caicedo JC, et al. 2022. Cell Painting predicts impact of lung cancer variants. Molecular Biology of the Cell 33: ar49. https://doi.org/10.1091/mbc.E21-11-0538 (link in bCourses)

Week 10: Application of Data Science in Healthcare and Computational Biology
- Establish understanding of data sources available today for innovative solutions
- Examine one or two companies in the space
- Review data applications addressing provider, payer, patient stakeholders
- Discuss challenges and opportunities in data-centric healthcare solutions
- Reading 10.1:
    - Ariel D Stern, et al. 2022. Proximie: Using XR Technology to Create Borderless Operating Rooms. (study.net)
    - Meyer, Andrew et al. 2022. Market Guide for Digital Health Platforms. Gartner. https://www.gartner.com/document/4021986?ref=solrAll&refval=365489716. (link in bCourses)
    - Pessin, Greg. 2023. The Real-Time Health System Architecture. Gartner.https://www.gartner.com/document/4004342?ref=authbottomrec&refval=4021986 (link in BCourses)
    - Ian Graber-Stiehl. 2023. Is the world ready for ChatGPT therapists? Nature. https://doi.org/10.1038/d41586-023-01473-4 (link in BCourses)

- Reading 10.2

- Rosabeth, Kanter, et al. 2022. CVS Health: Prescription for Transformation. HBS. (study.net)
- Blumenthal, David et al. 2022. Amazon's Foray into Primary Care Won't Be Easy. HBR. https://hbr.org/2022/08/amazons-foray-into-primary-care-wont-be-easy (link in bCourses)
- Developing reliable AI tools for healthcare. 2023. Google. https://deepmind.google/discover/blog/codoc-developing-reliable-ai-tools-for-healthcare/ (link in bCourses)

Week 11: Application of Data Science in Cybersecurity and Cyber Defense
- Develop understanding of relevant academic research in the field
- Guest speaker
- Reading 11.1:
    - Sarker, I.H., Kayes, A.S.M., Badsha, S. et al. Cybersecurity data science: an overview from machine learning perspective. J Big Data 7, 41 (2020). https://doi.org/10.1186/s40537-020-00318-5
    - Hanks, Casey et al. 2022. Recognizing and Extracting Cybersecurity Entities from Text. https://doi.org/10.48550/arXiv.2208.01693 (link in bCourses)
    - Bayer, Markus et al 2022. Multi-Level Fine-Tuning, Data Augmentation, and Few-Shot Learning for Specialized Cyber Threat Intelligence. https://doi.org/10.48550/arXiv.2207.11076 (link in bCourses)
- Reading 11.2:
    - Hore, Soumyadeep et al. 2022. Deep Vulman - A Deep Reinforcement Learning-Enabled Cyber Vulnerability Management Framework. https://doi.org/10.48550/arXiv.2208.02369 (link in bCourses)
    - Securing Your AI Data Pipeline. Gartner. https://www.gartner.com/document/4004330?ref=solrAll&refval=335555045 (link in bCourses)
    - Lowans, Brian et al. 2023. Hype Cycle for Data Security, 2023. Gartner. https://www.gartner.com/interactive/hc/4531199?ref=solrAll&refval=374931601 (link in bCourses)

Week 12: Application of Data Science in Robotics and Autonomous Systems
- Review data applications addressing different challenges in robotics and autonomous systems
- Guest speaker
- Examine one or two companies in the space
- Discuss challenges and opportunities

- Reading 12.1
    - Daftry, Shreyansh et al. 2023. LunarNav: Crater-based Localization for Long-range Autonomous Lunar Rover Navigation. https://arxiv.org/pdf/2301.01350.pdf (link in bCourses)
    - Rafael Barmak et al. A robotic honeycomb for interaction with a honeybee colony.Sci. Robot.8,eadd7385(2023).https://www-science-org.libproxy.berkeley.edu/doi/10.1126/scirobotics.add7385#tab-citations (link in bCourses)
    - Rayport, Jeffery et al. 2023. Cobalt Robotics: Scaling Workplace Robotics. HBS. (study.net)

- Reading 12.2
    - Hype Cycle for Mobile Robots and Drones, 2023. 2023. Gartner. https://www.gartner.com/interactive/hc/4536299?ref=solrAll&refval=389874881
    - Sharma, Archit et al. 2022. Autonomous Reinforcement Learning: Formalism and Benchmarking. https://arxiv.org/pdf/2112.09605.pdf (link in bCourses)
    - Hiroshi Ito et al. Efficient multitask learning with an embodied predictive model for door opening and entry with whole-body control.Sci. Robot.7,eaax8177(2022).https://www-science-org.libproxy.berkeley.edu/doi/10.1126/scirobotics.aax8177 (link in bCourses)

- Assignment due: Written report #3 based on prompt

Week 13: Application of Data Science in the Non-Profit Sector
- Explore how nonprofits use data science today and how non-profit organizations can use data science in the future
- Discuss challenges and opportunities in building data driven organization in non-profits
- Guest speaker
- Reading Week 13.1:
    - Neufeld, Derrick et al. 2017. Calgary Drop-In Centre: Donor Information System. HBS. (study.net)
    - Yoffie, David B. et al. 2021. Collaboration Wars: Slack vs. Microsoft Teams. HBS (study.net)
- Reading Week 13.2:
    - Groysberg, Boris et al. 2022. CityScore: Big Data Comes to Boston. HBS. (study.net)

- Thomke Stefan, et al. 2009. Design Thinking and Innovation at Apple. HBS. (study.net)

Week 14: Student presentations on a modern data application end to end using the frameworks
- Final assignment due: Each student will be given a case and answer case questions. In addition, each student will apply frameworks learned in class, propose a data science strategy for the next 5-10 years based on the evaluation of the current data science capabilities and applications, present to the C-level stakeholders.

Diversity and Inclusion

Integrating a diverse set of experiences is important for a more comprehensive understanding of machine learning. We will make an effort to read papers and hear from a diverse group of practitioners, still, limits exist on this diversity in the field of machine learning. We acknowledge that it is possible that there may be both overt and covert biases in the material due to the lens with which it was created. We would like to nurture a learning environment that supports a diversity of thoughts, perspectives and experiences, and honors your identities (including race, gender, class, sexuality, religion, ability, veteran status, etc.) in the spirit of the UC Berkeley Principles of Community.

To help accomplish this, please contact your instructor or submit anonymous feedback through iSchool channels if you have any suggestions to improve the quality of the course. If you have a name and/or set of pronouns that you prefer we use, please let your instructor know. If something was said in class (by anyone) or you experience anything that makes you feel uncomfortable, please talk to your instructor about it. If you feel like your performance in the class is being impacted by experiences outside of class, please don't hesitate to talk with your instructor. We want to be a resource for you. Also, anonymous feedback is always an option, and may lead to your instructor to make a general announcement to the class, if necessary, to address your concerns.

As a participant in teamwork and course discussions, you should also strive to honor the diversity of your classmates.

If you prefer to speak with someone outside of the course, MICS Academic Director Lisa Ho, I School Assistant Dean of Academic Programs Catherine Cronquist Browning, and the UC Berkeley Office for Graduate Diversity are excellent resources. Also see the following link: https://www.ischool.berkeley.edu/about/community.

Attendance and Participation

We believe in the importance of the social aspects of learning: between students, and between students and instructors, and we recognize that knowledge-building is not solely occurring on an individual level, but that it is built by social activity involving people and by members engaged in the activity. Participation and communication are key aspects of this course that are vital to the learning experiences of you and your classmates.

> Therefore, we like to remind all students of the following requirements for live class sessions:
>
> - Students are required to join live class sessions from a study environment with video turned on and with a headset for clear audio, without background movement or background noise, and with an internet connection suitable for video streaming.
>
> - You are expected to engage in class discussions, breakout room discussions and exercises, and to be present and attentive for your and other learners' in-class presentations.
>
> - Keep your microphone on mute when not talking to avoid background noise. Do your best to minimize distractions in the background video, and ensure that your camera is on while you are engaged in discussions.

That said, in exceptional circumstances, if you are unable to meet in a space with no background movement, or if your connection is poor, make arrangements with your instructor (beforehand if possible) to explain your situation. Sometimes connections and circumstances make turning off video the best option. If this is a recurring issue in your study environment, you are responsible for finding a different environment that will allow you to fully participate in classes, without distraction to your classmates. Please contact Student Affairs if you have problems meeting these requirements.

Failure to adhere to these requirements will result in an initial warning from your instructor(s), followed by a possible reduction in grades or a failing grade in the course.

Disability Services & Accommodations

The I School recognizes disability in the context of diversity, and the Disabled Students' Program (DSP) equips students with appropriate accommodations and services to remove barriers to educational access. Students seeking accommodations in this class are responsible for completing the DSP application process to obtain an accommodation letter. (510) 642-0518, https://dsp.berkeley.edu

Academic Integrity

The School of Information expects students to display the highest of ethical standards and judgment, equal to the integrity required of cybersecurity professionals who are entrusted with sensitive processes, systems, and data. Your actions related to academic integrity will follow you throughout your professional career.

If you are unsure about the parameters for acceptable conduct regarding collaboration or otherwise in this program, contact the instructor before taking any action that could put your integrity, your homework and exam scores, and your passing of this class at risk. Ignorance is not an acceptable excuse for inappropriate behavior. In addition to class grade sanctions under instructor discretion, violations are referred to the Center for Student Conduct (CSC). See Section VI of the Code of Student Conduct for examples of CSC sanctions.