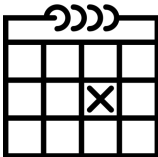




## Data Science Newsletter

Greetings from Data Science Advising. Welcome to the eighth issue of our Newsletter! If you missed previous issues, make sure to check them out [here](#).

### Major Updates



#### Drop-In Advising Updates

There will be **no Major Advisor drop-in advising during the summer**, but students can still [schedule appointments](#) to speak with a major advisor in-person or via Google Hangouts.

#### Data Science Spring 2019 Commencement Highlights

As you all know, the first ever Data Science Commencement took place on May 19th, 2019! If you were unable to attend, please feel free to check out our article titled "[Data Science Grads Shine at Commencement](#)" for a **short recap** on all of the wonderful speakers, guests, and student citations and awards recipients.

Additionally, if you would like to watch the ceremony in its entirety (or skip to specific snippets), the [recording is now available](#).

For a summary of the three messages that key note speaker **Kate Johnson**, President of Microsoft US, left with the Spring 2019 graduates please read her personal post [here](#). She included a picture of herself doing a **power-pose with our very own Katia Williams!**

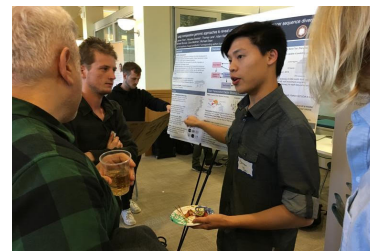
And thank you all for being a part of this journey with us! We are looking forward to celebrating all of you at all the Data Science Commencements to come.



### Student Opportunities

## Discovery Research Program Fall 2019 Project Application

In light of the growing demand for research opportunities, we are now allowing undergrads to **pitch their own research ideas** to lead a project in the fall. We are working on a pipeline to connect students like yourself to faculty and grad students who will review your proposals. While we can't guarantee that your project will be selected, we are committed to providing as much support as we can.



If your project is selected and vetted, you will be asked to present it at a **Student Pitch event on August 26th** (location and time TBA) open to all Discovery Students. It will be an opportunity for Discovery Applicants to form teams immediately and bypass the typical interview process. If a project team is formed, then it will be part of the Fall program and a member from the review board will be assigned to provide mentorship to you throughout the semester. If this interests you, then we encourage you to **apply with a project idea by July 26th**. Fall project applications are now open!

Find the Application [HERE](#).

Please email [ds-discovery@berkeley.edu](mailto:ds-discovery@berkeley.edu) if you have any questions.



### Goldman Sachs Digital Innovators Research Program

Goldman Sachs is looking for talented and top performing engineers for its new [Digital Innovators Research Program](#), which supports commercially-oriented research projects at the intersections of technology and financial services. Although the program is open to all applicants, it is focused on top-performing students **completing their undergraduate or graduate programs by August 2019**.

The program will select participants for a **one-year term** (September 2019 – August 2020) and \$100,000 in wages, mentorship, access to APIs, as well as the opportunity to present their work to senior Goldman Sachs leaders.

The program is interested in all types of work, with a special focus on the following themes:

- **Data Visualization:** Develop interesting ways to visualize massive sets of historical and real-time financial data.
- **Trading Strategy Environment:** Build novel frameworks for developing, backtesting and executing quantitative trading strategies.
- **Machine Learning/Research:** Create knowledge graphs and algorithms for use in exploring datasets and uncovering unexpected connections and insights.
- **Data Analytics:** Construct dashboarding frameworks and other mechanisms to assist investors in monitoring Goldman Sachs insights and identifying opportunities.
- **Mobile:** Create frameworks and applications that bring Goldman Sachs services and data to phones and tablets.

**Program Information:** For more program details, including Frequently Asked Questions with information about publishing and intellectual property, visit:

<https://www.goldmansachs.com/careers/students/programs/americas/digital-innovators-research-program.html>.

**Deadline:** Applications are due to Goldman Sachs **May 31, 2019**. Please direct questions to [digital-innovators@gs.com](mailto:digital-innovators@gs.com).

2019 and more)

This is a paid internship opportunity with the **NASA DEVELOP Program** for current students, recent college graduates, and career transitioning professionals, including veterans of the Armed Forces.

This is a great opportunity for participants who are interested in **practical applications of remote sensing and GIS, specifically in the field of Earth Science**. Our projects focus on addressing local and international community concerns while utilizing NASA's Earth observations.

Participants will work with NASA scientists and partner organizations to learn about the use of NASA remote sensing imagery for use in water resources, disaster management, ecological forecasting, and other applications to address environmental community concerns.

Details about the internship and how to apply can be found at <https://develop.larc.nasa.gov/apply.php>. The fall internship application is open now and the deadline is **June 28th** with the term starting **September 16th and through November 22nd**. We also have spring and summer internships available.

**Responsibilities will include:** literature review, data processing and analysis, composing of deliverables including a technical paper, presentation, and video. Previous GIS or remote sensing knowledge, while beneficial, is not required for acceptance.

Applicants must have excellent verbal and written communication skills and be able to work in a fast-paced environment. Days of the week are flexible, but applicants should be able to commit **25-29 hours per week** during normal office hours. The position is paid on an hourly basis and determined by education level. International students are not eligible to apply to NASA Center locations, however, they are eligible to apply to Regional Locations. Please see the DEVELOP website for details.



### TextNow Recruiting for a Senior Data Platform Engineer (Full-time)

As an experienced (Senior) **Data Platform Engineer** at **TextNow**, you will own the design, development and maintenance of TextNow's data warehouse that will enable us to make effective data-informed decisions across various business disciplines. You will lead initiatives to formalize data governance and management practices, rationalize our information lifecycle and key company metrics, mapping the metrics to TextNow's data warehouse and the various data sources feeding into it. In this role, you will have the opportunity to interact with different functional areas within the business and influence decision-making in a fast-growing mobile communications startup. This is a flat company in which you will take on a solid amount of ownership over your work.

For the full opportunity posting and application, please click [here](#). If you have any questions, please email Adrienne Buell Becerra at [adrienne.becerra@textnow.com](mailto:adrienne.becerra@textnow.com). Apply before July 31st, 2019.

We are a great group of passionate individuals who want to **disrupt the telecommunications industry!**



## Deloitte Corporate Finance - Investment Banking Analyst (Full-Time Summer 2020)

Working closely with clients, you will provide recommendations that are aligned with an organization's business goals and overall strategic and transactional objectives. Constructing financial models to help clients assess growth strategies, capital structure decisions, and transaction alternatives, will help you develop a comprehensive technical skill set at an early career stage.

Concurrently, you will employ a number of core valuation methodologies to help businesses evaluate their worth in the marketplace and advise them on appropriate ranges at which to conduct transactions. Also, you will have the opportunity to learn how to appropriately position businesses in the investor community by articulating value propositions and anticipating potential concerns.

Across these responsibilities, you will receive considerable exposure to senior bankers and clients as you participate in each phase of the transaction process. From preparing a pitchbook to win an assignment, to **traveling across the country** to conduct financial and operational due diligence on behalf of a client, Analysts on our platform have an immediate opportunity to add significant value on their teams.

To view the Handshake listing for more information, please click [HERE](#). Apply by Thursday, Aug 1, 2019.

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## Summer and Fall 2019 Courses

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### E150: Basic Modeling and Simulation Tools for Industrial Research Applications (Fall 2019)

Engineering 150 Basic Modeling and Simulation Tools for Industrial Research Applications is a new course that will be offered in Fall 2019! This course can be used to satisfy one of the upper division requirements of the Data Science [Applied Mathematics and Modeling Domain Emphasis](#) and the [Physical Science Analytics Domain Emphasis](#).

**Units:** 3

**When:** Tuesdays and Thursdays, 2-3:30pm

**Where:** 310 Jacobs Hall

**Instructor:** T. Zohdi

#### Course Description

The course emphasizes elementary modeling, numerical methods and their implementation on physical problems motivated by real-world phenomena that students are likely to encounter in their careers, involving dynamics, controls, structural analysis, materials engineering, robotics, manufacturing, heat-transfer, etc. The course will help students develop intuition about modeling physical systems and strengths and weaknesses of a variety of numerical methods, including:

- Discretization of differential equations,
- Recursion based methods for solving nonlinear systems,
- Machine learning algorithms for optimization and
- Statistics, sensitivity analysis and uncertainty quantification

To see the full **syllabus**, please visit:

[https://drive.google.com/file/d/1cTs6htnCYRmH\\_Vyy8lf3rtPI1znVzom-/view?usp=sharing](https://drive.google.com/file/d/1cTs6htnCYRmH_Vyy8lf3rtPI1znVzom-/view?usp=sharing).

To see this course listing on the **academic guide**, please visit:

<https://classes.berkeley.edu/content/2019-fall-engin-150-001-lec-001>.

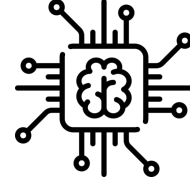
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**PH 196: Artificial Intelligence for Medicine and Health Policy (Fall**

2019)

**Faculty Instructor:** Ziad Obermeyer

**Links:** [CalCentral](#), [Schedule of Classes](#) (Class #33297)



## Course Overview

Over the coming decades, data and algorithms will transform medicine and our health care system. Whether you plan to be a doctor, an algorithm developer, or work elsewhere in the health sector, this course will help you understand the tremendous upside of artificial intelligence for health: what the tools of machine learning can do in this important sector, and where they can do harm. The course will focus on teaching concepts, not the mechanics of specific algorithms. But genuine conceptual understanding will require engagement with technical content (e.g., readings from computer science and statistics, problem sets requiring analysis of real datasets with statistical software). As a result, it is designed for students who are already comfortable with basic data analysis, thanks to coursework in data science/computer science, biostatistics/statistics, or economics (e.g., you should already know how to load and manipulate datasets in statistical software).

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## Upcoming Events

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### 'Information and Uncertainty in Data Science' Discussion Forum

**When:** 11am-12pm, Friday May 31st

**Where:** 190B Doe Library



The '[Information and Uncertainty in Data Science' Discussion Forum](#) is a forum for open inquiry and discussion about a wide range of recurring data science fundamentals, including information, uncertainty, entropy, bits, probability, machine learning, generalization, and others. The group facilitates academic discourse on the practical use of the fundamental concepts across a wide variety of research disciplines, and strives for clarity and understanding using real-world scenarios, visual examples, cutting edge questions and unique perspectives. This group focusses on understanding and sharing concepts that are often buried in mathematical language, especially entropy, reduction of uncertainty and connections between physical systems and information systems. All interested members of the UC Berkeley, UCSF, LBL and LLNL communities are welcome and encouraged to attend.

**More details available** at <http://compdatascience.org/entropy>.

**Contact:** BIDS Senior Fellow Gerald Friedland. [bids@berkeley.edu](mailto:bids@berkeley.edu), 510-664-4506.

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### Summer 2019 California Water Data Challenge and Datathon!

Get ready for the Summer 2019 [California Water Data Challenge](#), hosted by the [West Big Data Innovation Hub](#), [California Governor's Office of Planning and Research](#), the [Water Foundation](#), [Leonardo DiCaprio Foundation](#), and collaborators!



Get involved now:

- Follow **#CAWaterDataChallenge** on social media, [join the community mailing list](#), and start forming #opendata teams  .

- Save the Date for an event in San Francisco **June 18** featuring the Data For Good Exchange (D4GX) team at Bloomberg, our **Division of Data Sciences'** own [Meredith Lee](#), and colleagues from across the state.
- RSVP for the [July 1 California Water Datathon](#) held in Sacramento. Projects will build upon our Division Discovery Research Program collaborations from Spring semester, and Division staff will be facilitating the community datathon as part of the [Fourth Annual California Water Data Science Symposium](#).