

Photo credit: Junyang Xu

#### **HOW TO USE THIS MAP**

Use this map to help plan and guide your experience at UC Berkeley, including academic, co-curricular, and discovery opportunities. Everyone's Berkeley experience is different and activities in this map are suggestions. Always consult with your advisors whenever possible for new opportunities and updates.

#### **CONNECT WITH US**

#### **Events**

Attend department events with students, staff, and faculty. Visit **data.berkeley.edu** for news and updates. Also check out events hosted by the Berkeley Institute for Data Science (BIDS): **events.berkeley.edu/BIDS**.

Join our undergraduate email list-serve and view past issues of our student newsletter at data.berkeley.edu/academics/data-science-undergraduate-studies/advising/advising-resources

Look out for information about annual events including:

- Data & Tech for All Week
- Cal Water Data Hackathon
- Women in Data Science (WIDS)
- Hack for Social Good

#### **ADVISING**

Visit data.berkeley.edu/academics/ undergraduate-programs/data-scienceadvising for information about our advisors, advising hours and locations, and how to request an appointment.

For quick questions, email us at **ds-advising@ berkeley.edu** or **ds-peer-advising@berkeley.edu**.

Visit **ue.berkeley.edu/majormaps** for the latest version of this major map.

Berkeley

Data Science

367 Evans Hall

Berkeley, CA 94720-1786

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### DATA SCIENCE

Bachelor of Arts



#### **INTRODUCTION TO THE MAJOR**

Data science combines computational and inferential reasoning to draw conclusions based on data about some aspect of the real world. Data scientists come from all walks of life, all areas of study, and all backgrounds. They share an appreciation for the practical use of mathematical and scientific thinking and the power of computing to understand and solve problems for business, research, and societal impact.

The Division offers a **major** and **minor** in Data Science, as well as coursework such as **Data 8: Foundations of Data Science**, its **connector courses**, and **Data Science modules** that are broadly accessible to all students.



Photo credit: Junyang Xu

# I think that the broadest possible set of people in the world need to be owners of the data. >>

- Statistics Professor Ani Adhikari, Co-Creator of Data 8

#### THE DATA SCIENCE CURRICULUM

Students will gain deep technical knowledge and an understanding of the social and human contexts and ethical implications of how data are collected, analyzed and used. Students also gain expertise in applying knowledge in a chosen Domain Emphasis; a few examples include:

- Cognition
- Computational Biology
- Geospatial Information & Technology
- Human Behavior & Psychology
- Inequalities in Society
- Social Policy and Law

#### **AMPLIFY YOUR MAJOR**

- Help shape the Data Science program
  as part of a **student team** working on
  data analytics, curriculum development,
  communications, human resources, etc.
- Apply to be a data discovery consultant.
- Make an impact with cutting-edge research and gain hands-on skills with the **Data Science Discovery Program**.
- Join a **student organization** such as those in the **Data Science Nexus**.

## DATA SCIENCE

Bachelor of Arts

#### **DESIGN YOUR JOURNEY**



	FIRST YEAR	SECOND YEAR	THIRD YEAR	FOURTH YEAR
<b>Explore</b> your major	Review major and college requirements. Meet with a Data Science major advisor and your college advisor to create a 4-year schedule.  Talk to Data Science peer advisors about life in the major.  Join or form a study group.  Take Data 8.	Read through the major <b>Domain Emphasis</b> options, noting those that most interest you.  Complete lower division prerequisites and <b>declare the major</b> .  Review the Data Science <b>Piazza forum</b> .  Consider augmenting your major with a <b>certificate</b> or <b>minor</b> .	Narrow down your <b>Domain Emphasis</b> preferences and start upper division coursework. Review degree progress with your advisors. Get involved with the Data Science Education Program to develop a portfolio and make an impact on campus.	Do a <b>degree check</b> to ensure you are on track to graduate.  Complete any "bucket list" courses.  Finish remaining major, college, and campus requirements.
Connect and build community	Get 1:1 mentoring with <b>Berkeley Connect</b> .  Find academic support at the <b>Student Learning Center</b> and other tutoring resources.  Check out <b>Data Scholars</b> , a community of underrepresented and nontraditional students in Data Science.	Join a <b>student organization</b> such as those in the <b>Data Science Nexus</b> .  Sign up for the Data Science <b>email list</b> and start attending <b>department events</b> .  Engage in public service and leadership experiences by participating in a <b>Public Service Center Program</b> .	Help shape the Data Science program by joining a student team, serving as a <b>data discovery consultant</b> , or becoming a <b>peer advisor</b> .  Join a <b>working group</b> to collaborate under the broad rubric of data-intensive social science.  Become a <b>Golden Bear Orientation Leader</b> and welcome new students to UC Berkeley.	Join a professional organization related to your interests.  Volunteer and give back to the community.  Attend a variety of performances, events, and activities to expand your mind.  Connect with alumni groups and build your network as you prepare to graduate.
<b>Discover</b> your passions	Enroll in a <b>connector course</b> to see how Data 8 concepts apply in a variety of academic areas.  Visit the <b>Career Counseling Library</b> to learn more about your academic and professional interests.  Discover new interests in a <b>Freshman Seminar</b> , <b>L&amp;S 1</b> , or a student-run <b>DeCal course</b> .	Reflect on successes, setbacks, and lessons learned in your first year.  Take advantage of the free interactive <b>course textbooks</b> for core Data Science courses.  Enroll in a <b>Big Ideas Course</b> or <b>Discovery Course</b> .	Explore team-based, data research projects in the Data Science Discovery Program.  Pursue independent projects with help from the Data Discovery Consultants or D-Lab workshops.  Consider applying to the Data Science Honors Program or writing a senior thesis.	Attend lectures and speaker series hosted by the Berkeley Institute for Data Science (BIDS) or other related research units.  Take on a leadership role in a student organization.  Find research and funding opportunities in the OURS database.
Engage locally and globally	Get involved in <b>Data Scholars</b> or other ways to engage in your classes from the start.  Look into <b>volunteer</b> and <b>student organization</b> opportunities across campus.  Explore study, internship, and research abroad options with <b>Berkeley Study Abroad</b> .	Learn about democratizing data science at  Data & Tech for All Week.  Look into student opportunities to get involved in the Data Science Education Program.  Discuss and explore options to study abroad while making degree progress.	Experience life outside of Berkeley via campus visitor and exchange programs, UCDC, Cal in the Capital, or the Cal-in-Sacramento Fellowship.  Attend conferences or get involved in Data Science-related projects to supplement your curriculum.	Consider gap year opportunities prior to embarking on your next academic or career adventure.  Explore service opportunities after graduation, such as Peace Corps, Teach for America, or U.S. Department of State.
Reflect and plan your future	Sign up for Handshake and CareerMail.  Visit Berkeley Career Engagement and the Career Counseling Library and develop a plan for getting career ready.  Meet alumni at a Career Connections event.  Explore Winter Break Externships with alums.	Meet with a <b>Career Educator</b> to discuss your career or graduate school goals.  Try some <b>self-assessment</b> activities to explore different industries within data science (e.g. social justice).  Get to know faculty to develop rapport for letters of recommendation.	Attend an <b>internship fair</b> and apply for summer internships.  Develop a portfolio that demonstrates your analytical and problem-solving skills.  Conduct <b>informational interviews</b> .  Develop your network. Update your resume	Attend Employer Info Sessions and On-Campus Recruiting.  Join the Data Science alumni group on LinkedIn.  Ask professors and graduate student instructors for recommendation letters.  Take advantage of Alumni Services.

and **LinkedIn** profile.

### WHAT CAN I DO WITH MY MAJOR?

The Data Science BA positions students to help inform and develop solutions for a range of pressing challenges, from adapting industry to a new world of data, to amplifying learning in education, to helping communities recover from disaster. Our alumni are employed in a wide variety of roles and industries.

#### **Jobs and Employers**

Analytics Intern, Major League Baseball Applications Engineer, Accenture

Data Analyst, Political Campaign
Data Engineer, Atlassian
Data Scientist, Uber
Machine Learning Engineer, IBM
Product Analyst, Hive
Product Manager, Zynga
Site Reliability Engineer, Adobe
Software Engineer, Salesforce
Technical Staff, Oracle

#### **Graduate Programs**

Computer Science, Masters
Earth and Environmental Science,
PhD
Information and Data Science,
Masters

Examples gathered from LinkedIn and an internal survey of recent Berkeley graduates.

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