

DATA SCIENCE (GRADUATE MINOR FIELD)

Graduate School

Program Website (<https://stat.cornell.edu/academics/phd-minor-data-science>)

Program Description

The minor field of data science prepares students to work on data-intensive applications. Many employers actively seek applicants with data science skills and minoring in data science will widen a student's set of career paths substantially.

Students take courses in four areas: computation, statistical modeling and inference, optimization, and ethical, legal, and policy issues. The director of graduate studies will maintain a list of courses in each of these areas. The courses that a student uses toward the minor must be in at least two of the four areas, and no more than two courses in any one of the areas can be used toward the minor.

A Ph.D. student minors in the field of data science by adding a faculty member in the field as a minor member of the student's committee.

Graduate Minor Field Requirements

To minor in Data Science (DS), a student must have a member of this field on the student's committee. Students can nominate a Data Science field faculty member to their committee through Student Center. Be sure that the field faculty member is listed as a Minor Member for Data Science.

The minor member will record the courses taken in the minor on a form supplied by the field. The completed form will be given to the Chair of the student's committee, e.g., at the B-exam.

Required Coursework

The course requirement is at least 4 courses and at least 14 credit hours. All courses used for satisfying Data Science Minor requirements must be numbered 5000 or higher with at least 6 credit hours numbered 6000 or higher. All courses used towards the minor must be completed with a letter grade of B or better. Courses will be in four areas: computation, statistical modeling and inference, optimization, and ethical, legal, and policy issues. The DGS will maintain a list of courses (<https://stat.cornell.edu/academics/phd-minor-data-science/requirements>) in each of these areas. The courses that a student uses towards the minor must be in at least two of the four areas, and no more than two courses in any one of the areas can be used towards the minor. A student's course selection must be approved by the minor committee member.

At most two of the four courses used towards the minor in DS can be courses in the student's major or courses cross-listed in the major, e.g., a Computer Science (CS) major can use at most two CS courses or courses cross-listed as CS courses. At least two courses used for the DS minor must be courses not used for the major or for a second minor.

Faculty

Jayadev Acharya (<http://www.ece.cornell.edu/faculty-directory/jayadev-acharya>)

- **Campus:** Ithaca - (Minor Member)
- **Concentrations:** *Data Science*: data science

Yoav Artzi (<http://yoavartzi.com/>)

- **Campus:** Ithaca - (Minor Member)
- **Concentrations:** *Data Science*: data science
- **Research Interests:** Natural language processing, machine learning, computer vision, robotics

Kavita Bala (<http://www.cs.cornell.edu/%7Ekb/>)

- **Campus:** Ithaca - (Minor Member)
- **Concentrations:** *Data Science*: data science

Siddhartha Banerjee (<http://engineering.cornell.edu/people/sid-banerjee/>)

- **Campus:** Ithaca - (Minor Member)
- **Concentrations:** *Data Science*: data science

Sumanta Basu (<http://www.stat.cornell.edu/people/faculty/sumanta-basu>)

- **Campus:** Ithaca - (Minor Member)
- **Concentrations:** *Data Science*: data science

David S. Bindel (<http://www.cs.cornell.edu/~bindel>)

- **Campus:** Ithaca - (Minor Member)
- **Concentrations:** *Data Science*: data science

Eilyan Bitar (<http://bitar.engineering.cornell.edu/>)

- **Campus:** Ithaca - (Minor Member)
- **Concentrations:** *Data Science*: data science

James G. Booth (<http://cals.cornell.edu/james-g-booth>)

- **Campus:** Ithaca - (Minor Member)
- **Concentrations:** *Data Science*: data science

Florentina Bunea (<http://stat.cornell.edu/people/faculty/florentina-bunea>)

- **Campus:** Ithaca - (Minor Member)
- **Concentrations:** *Data Science*: data science

Cristobal Cheyre Forestier (<http://bowers.cornell.edu/people/cristobal-cheyre>)

- **Campus:** Ithaca - (Minor Member)
- **Concentrations:** *Data Science*: data science

Jim Dai (<http://www.orie.cornell.edu/faculty-directory/jim-dai>)

- **Campus:** Ithaca - (Minor Member)
- **Concentrations:** *Data Science*: data science

Anil Damle (<http://www.cs.cornell.edu/~damle/>)

- **Campus:** Ithaca - (Minor Member)
- **Concentrations:** *Data Science*: data science
- **Research Interests:** Numerical linear algebra, computational quantum chemistry, computational statistics, fast algorithm

Thomas J Diccio (<http://stat.cornell.edu/people/faculty/thomas-diccio>)

- **Campus:** Ithaca - (Minor Member)
- **Concentrations:** *Data Science*: data science

Jacob Dorn (<http://as.cornell.edu/people/jacob-dorn>)

- **Campus:** Ithaca - (Minor Member)
- **Concentrations:** *Data Science*: data science
- **Research Interests:** Health economics, industrial organization, econometrics, causal inference

Ahmed El Alaoui (<http://bowers.cornell.edu/people/ahmed-el-alaoui>)

- **Campus:** Ithaca - (Minor Member)
- **Concentrations:** *Data Science*: data science
- **Research Interests:** Asymptotic Statistics, Graphical Models, Machine Learning, Stochastic Processes

Peter Frazier (<http://www.orie.cornell.edu/faculty-directory/peter-frazier>)

- **Campus:** Ithaca - (Minor Member)
- **Concentrations:** *Data Science*: data science

Ziv Goldfeld (<http://www.duffield.cornell.edu/people/ziv-goldfeld/>)

- **Campus:** Ithaca - (Minor Member)
- **Concentrations:** *Data Science*: data science

Bharath Hariharan (<http://home.bharathh.info/>)

- **Campus:** Ithaca - (Minor Member)
- **Concentrations:** *Data Science*: data science
- **Research Interests:** Statistics and Machine Learning, Artificial Intelligence

Shane G. Henderson (<http://www.orie.cornell.edu/faculty-directory/shane-g-henderson>)

- **Campus:** Ithaca - (Minor Member)
- **Concentrations:** *Data Science*: data science

Thorsten Joachims (<http://infosci.cornell.edu/content/joachims>)

- **Campus:** Ithaca - (Minor Member)
- **Concentrations:** *Data Science*: data science

Nathan Kallus (<http://www.orie.cornell.edu/faculty-directory/nathan-kallus>)

- **Campus:** Cornell Tech (NYC) - (Minor Member)
- **Concentrations:** *Data Science*: data science

Kengo Kato (<http://stat.cornell.edu/people/faculty/kengo-kato>)

- **Campus:** Ithaca - (Minor Member)
- **Concentrations:** *Data Science*: data science

René Kizilcec (<http://infosci.cornell.edu/content/kizilcec>)

- **Campus:** Ithaca - (Minor Member)
- **Concentrations:** *Data Science*: data science

Dan Kowal (<http://stat.cornell.edu/people/faculty/dan-kowal>)

- **Campus:** Ithaca - (Minor Member)
- **Concentrations:** *Data Science*: data science

- **Research Interests:** Bayesian statistics; time series; functional data; spatial data; missing data; regression; statistical computing; prediction

Vikram Krishnamurthy (<http://www.ece.cornell.edu/faculty-directory/vikram-krishnamurthy>)

- **Campus:** Ithaca - (Minor Member)
- **Concentrations:** *Data Science*: data science

Karen Levy (<http://sociology.cornell.edu/karen-levy>)

- **Campus:** Ithaca - (Minor Member)
- **Concentrations:** *Data Science*: data science

Stephen Robert Marschner (<http://www.cs.cornell.edu/%7Esrsm/>)

- **Campus:** Ithaca - (Minor Member)
- **Concentrations:** *Data Science*: data science

David Matteson (<http://www.ilr.cornell.edu/people/david-matteson>)

- **Campus:** Ithaca - (Minor Member)
- **Concentrations:** *Data Science*: data science

David Mimno (<http://bowers.cornell.edu/people/david-mimno>)

- **Campus:** Ithaca - (Minor Member)
- **Concentrations:** *Data Science*: data science

Francesca Molinari (<http://economics.cornell.edu/francesca-molinari>)

- **Campus:** Ithaca - (Minor Member)
- **Concentrations:** *Data Science*: data science

Jose Luis Montiel Olea (<http://as.cornell.edu/news/new-faculty-jose-luis-montiel-olea>)

- **Campus:** Ithaca - (Minor Member)
- **Concentrations:** *Data Science*: data science
- **Research Interests:** Econometrics, Machine Learning, Statistical Decision Theory, Time Series

Yang Ning (<http://stat.cornell.edu/people/faculty/yang-ning>)

- **Campus:** Ithaca - (Minor Member)
- **Concentrations:** *Data Science*: data science

Helen Nissenbaum (<http://infosci.cornell.edu/content/nissenbaum>)

- **Campus:** Ithaca - (Minor Member)
- **Concentrations:** *Data Science*: data science

David Ruppert (<http://www.orie.cornell.edu/faculty-directory/david-ruppert>)

- **Campus:** Ithaca - (Minor Member)
- **Concentrations:** *Data Science*: data science

Mert Sabuncu (<http://sabuncu.engineering.cornell.edu/>)

- **Campus:** Cornell Tech (NYC) - (Minor Member)
- **Concentrations:** *Data Science*: data science

David B Shmoys (<http://infosci.cornell.edu/content/shmoys>)

- **Campus:** Ithaca - (Minor Member)
- **Concentrations:** *Data Science*: data science

Noah Snaveley (<http://www.cs.cornell.edu/~snaveley/>)

- **Campus:** Cornell Tech (NYC) - (Minor Member)
- **Concentrations:** *Data Science*: data science
- **Research Interests:** Computer graphics and vision, recovering 3D structure from large community photo collections

Karthik Sridharan (<http://www.cs.cornell.edu/~sridharan/>)

- **Campus:** Ithaca - (Minor Member)
- **Concentrations:** *Data Science*: data science

Joerg Stoye (<http://economics.cornell.edu/j%C3%B6rg-stoye>)

- **Campus:** Ithaca - (Minor Member)
- **Concentrations:** *Data Science*: data science

Jennifer J. Sun (<http://jenjsun.com/>)

- **Campus:** Ithaca - (Minor Member)
- **Concentrations:** *Data Science*: data science
- **Research Interests:** Machine Learning, AI

Lang Tong (<http://www.ece.cornell.edu/faculty-directory/lang-tong>)

- **Campus:** Ithaca - (Minor Member)
- **Concentrations:** *Data Science*: data science

Huseyin Topaloglu (<http://www.orie.cornell.edu/faculty-directory/huseyin-topaloglu>)

- **Campus:** Cornell Tech (NYC) - (Minor Member)
- **Concentrations:** *Data Science*: data science

Aaron B. Wagner (<http://www.ece.cornell.edu/faculty-directory/aaron-b-wagner>)

- **Campus:** Ithaca - (Minor Member)
- **Concentrations:** *Data Science*: data science

Y. Samuel Wang (<http://stat.cornell.edu/people/faculty/y-samuel-wang>)

- **Campus:** Ithaca - (Minor Member)
- **Concentrations:** *Data Science*: data science
- **Research Interests:** Asymptotic Statistics, Graphical Models, Machine Learning

Angelina Wang (<http://tech.cornell.edu/people/angelina-wang/>)

- **Campus:** Cornell Tech (NYC) - (Minor Member)
- **Concentrations:** *Data Science*: data science
- **Research Interests:** Machine Learning Fairness, AI Evaluation, Societal Impacts of AI

Marten Wegkamp (<http://stat.cornell.edu/people/faculty/marten-wegkamp>)

- **Campus:** Ithaca - (Minor Member)
- **Concentrations:** *Data Science*: data science

Kilian Quirin Weinberger (<http://www.cs.cornell.edu/~kilian/>)

- **Campus:** Ithaca - (Minor Member)
- **Concentrations:** *Data Science*: data science

- **Research Interests:** Autonomous driving, deep learning, learning with marginalized corruption, resource efficient machine learning, Bayesian optimization, metric learning, ranking, multitask learning, machine learning, manifold learning

Martin Timothy Wells (<http://bowers.cornell.edu/people/martin-t-wells>)

- **Campus:** Ithaca - (Minor Member)
- **Concentrations:** *Data Science*: data science

Matthew Wilkens (<http://infosci.cornell.edu/content/wilkens>)

- **Campus:** Ithaca - (Minor Member)
- **Concentrations:** *Data Science*: data science
- **Research Interests:** Quantitative and computational methods to study large-scale developments in literary and cultural history. Work has focused, in particular, on literary text mining, geolocation extraction, genre detection, and the cross-pollination of critical and social-scientific methods.

David Paul Williamson (<http://infosci.cornell.edu/content/williamson>)

- **Campus:** Ithaca - (Minor Member)
- **Concentrations:** *Data Science*: data science

Dana Yang (<http://stat.cornell.edu/people/faculty/dana-yang>)

- **Campus:** Ithaca - (Minor Member)
- **Concentrations:** *Data Science*: data science
- **Research Interests:** Machine Learning, Asymptotic Statistics, Graphical Models

Christina Lee Yu (<http://www.orie.cornell.edu/faculty-directory/christina-lee-yu>)

- **Campus:** Ithaca - (Minor Member)
- **Concentrations:** *Data Science*: data science

Ramin Zabih (<http://bowers.cornell.edu/people/ramin-zabih>)

- **Campus:** Cornell Tech (NYC) - (Minor Member)
- **Concentrations:** *Data Science*: data science
- **Research Interests:** Computer vision and its applications, medical imaging, motion and stereo