Department of Statistics
Virtual Open House

December 2, 2025

UNIVERSITY OF GEORGIA

Thank you for coming!

Agenda

- Welcome and Introduction
  - Dr. Dan Hall, Interim Department Head
- A Student's Perspective
  - Andrew Mosbo, 3rd yr PhD Student
- Questions and Answers
  - Dr. Ting Zhang, Dir. of Grad Studies (Recruiting)
  - Dr. Liang Liu, Dir. of Grad Studies (Advising)




Why Statistics/Data Science?

- Statistics is the science of extracting knowledge from data.
- Data Science is a broader term, encompassing statistics, and areas of computer science that are focused on data processing, data curation, and algorithms.
  - Commonly, data science has come to be known as an area at the interface of statistics and computer science focused on big data, algorithms, and the use of data to produce accurate predictions, but not necessarily inferences.
- Which one?
  - You can't go wrong.
  - Statistics confers more foundational skills. Easier to learn data science on the job after a degree in statistics than vice versa.

Why Statistics/Data Science?

Statistical thinking will one day be as necessary for efficient citizenship as the ability to read and write.

– H.G.Wells

Statistics is the grammar of science.

– Karl Pearson

Statistics … the most important science in the whole world: for upon it depends the practical application of every other science and of every art; the one science essential to all political and social administration, all education, all organisation based upon experience, for it only gives the results of our experience.

– Florence Nightingale

Why Statistics/Data Science?

US News & World Report Best Jobs, 2025:

- Data Scientist.
  - #4 in Best Technology Jobs, #6 in Best STEM Jobs, #8 in 100 Best Jobs
  - Median salary: $108,020 (in 2023)
- Statistician.
  - #9 in Best Technology Jobs
  - Median salary: $104,110 (in 2023)

US BLS:

- Data Scientist
  - 4th fastest growing job in 2024 (34% growth rate)
  - Median salary of $112,590.
- Statistician
  - 9% growth rate
  - Median Salary of $103,300

Why Statistics/Data Science?

Jobs for data scientists and statisticians are abundant.

- **Business:** Financial Services; Tech Sector; Manufacturing; Market research; Product development; Management
- **Physical Sciences:** Meteorology; Physics, Chemistry, Geography
- Social Science: Psychology, Sociology, Educational Research
- **Health & Medicine:** Epidemiology, Pharmaceuticals, Environmental Health
- **Agriculture & Environment:** Animal Science, Food Science, Crop & Soil Science, Ecology
- **Government:** Census Bureau, Government Research Agencies, Regulatory Agencies.
- **Biological Sciences:** Marine Science, Genetics, Biology

Why UGA?

- UGA is an outstanding university with fantastic people, facilities, academic programs, and opportunities.
  - A great place to study and live, a degree that will create opportunities, an alma mater to love and take pride in.
  - We are UGA
- UGA is beautiful campus and Athens, GA is a great place to live and work.
  - Campus Tour
- UGA is a great place for graduate study.
  - Welcome to the UGA Graduate School

Why UGA?

- Founded in 1785, 1st public university in the US
- #10 public university in US
  - Niche
- Top 20 public university in US
  - US News & WR
  - Forbes
- #2 Best College for Student Life in America
  - Niche
- 2024 Enrollment.
  - Grad: 10,747
  - Total: 43,146

Why UGA Statistics?

- #35 Statistics Program in the US (US News & World Report, 2022)
- 4 graduate degree programs
  - PhD in Statistics
  - MS in Statistics
  - MS in Data Science
  - Online MS in Applied Data Science (new in Fall ‘24)
- 34 faculty
  - 21 tenured/tenure-track (asst/assoc/full professor)
  - 13 non-TT (11 lecturers, 2 academic professionals)

Why UGA Statistics?

Placement of recent PhDs:

- Ariz. State U; Boston U; Coll. of Charleston; UGA; Indiana U; Drake, Duke; Clemson; SMU; U. Alabama; U. Oregon; U. Virginia; VA Commonwealth; William & Mary;…
- State Farm; Wells Fargo; Facebook; Workday; Sprint; Johnson & Johnson; Capital One; ING Direct; City Bank; Lexis-Nexis; Liberty Mutual; JP Morgan Chase; Synovus; Apple; FDA; Amgen; Pinterest; Google…

Placement of recent MS students:

- Apple; Assurant; Coca-Cola; Sun Trust; Lexis-Nexis; Black Arch, DC; US CDC; Ernst & Young; Boehringer-Ingelheim; State Farm; USDA; …

Why UGA Statistics?

Faculty Research Interests

- Time series analysis
- Big data analytics
- Bioinformatics & ‘omics applications
- Infectious diseases
- Statistical machine learning
- (Neuro-)Image analysis
- Design of experiments
- High dimensional inference
- Phylodynamics
- Statistical climatology
- Precision agriculture
- Symbolic data analysis
- Small-area estimation & survey sampling
- Social networks
- Statistical genetics
- Causal inference
- Geophysics
- Functional data analysis
- Computer experiments
- Microbiome data analysis
- Sequential analysis
- Change-point/threat detection
- Econometrics and financial applications
- Chemical sensing
- Spatial and spatio-temporal statistics
- Applications in Ecology/Env. Sciences

Why UGA Statistics?

Faculty Research Excellence:

- 3 named professorships
  - University Professor Lynne Billard
  - Distinguished Research Professor Ping Ma
  - UGA Athletic Associate Professor Wenxuan Zhong
- 2 AAAS Fellows, 5 ASA Fellows, 3 IMS Fellows, 3 ISI Elected Members

Faculty Teaching Excellence:

- 9 teaching award winners

Why UGA Statistics?

Just the right size:

- 45 PhD Students
- 19 full-time MS + 23 secondary MS + 16 online MS-ADS
- 291 undergraduate majors (154 DS, 137 STAT)

- Big enough to have a rich social/academic life, plenty of classes to choose from.
- Small enough not to get lost.

Why UGA Statistics?

Many opportunities for support:

- Teaching assistantships
  - This is an instructional support role that may include grading, proctoring, and leading problem/lab sections.
- Graduate teaching assistantships
  - This is an instructor of record role as the primary, independent instructor for a course.
- Research assistantships
  - These are opportunities to work on a funded research project
  - May be with your major professor contributing to your dissertation/thesis research.
  - May be with faculty outside of Statistics, in which case it is less likely to be part of your dissertation, but may still bring publication opportunities.
- Consulting Assistantship
  - This involves working for the UGA Statistical Consulting Center (SCC)

Why UGA Statistics?

More opportunities for support:

- State Farm MAGNet Program (internship)
- Other internships
- Graduate school awards and assistantships
- Lifsey & Statistics Student Support Fund Scholarships (departmental awards)
- Out-of-State tuition waivers

UGA Statistical Consulting Center

- The SCC is a unit within the department and a Core Research Facility of the University.
- Mission:
  - To provide **statistical support** for research at UGA.
  - To **educate** statistics graduate students, providing them training in
    - advanced statistical methods,
    - applied statistics,
    - communication, and
    - the techniques of collaborative and interdisciplinary research.

UGA Statistical Consulting Center

- Staff:
  - Director (Dan Hall)
  - Associate Director (Dr. Jinae Lee)
  - 5 graduate student consultants
  - Several volunteer graduate consultants
- Location: Room 339, Brooks Hall
- www.stat.uga.edu/consulting

UGA Statistical Consulting Center

Some Recent Projects:

- Statistical analysis of arboreality of Western Gorillas
- Racial disparities in use of long-acting anti-psychotics among schizophrenics.
- Sturgeon age classification from length and day of catch.
- Echocardiographic evaluation in koi under manual restraint versus anesthesia.
- The effect of the Truist Park stadium construction on surrounding properties.
- Estimating heat tolerance of cotton in terms of photosynthetic efficiency.
- Sampling and testing protocols for detecting Chagas disease among individuals with low infection levels.
- Investigating racial disparities in bar passage rates.
- Water consumption patterns as a management and early-warning tool in commercial chicken houses
- Field validation of wearable camera technologies for dietary assessment.

State Farm MAGNet Program

- Information: https://www.stat.uga.edu/magnet-program-0
- Open to MS students only
- Must be a US citizen or permanent resident
- About 4 new students selected each year
- Interviews on site or by phone
- Full-time summer internship plus 1-year (or 2-year) assistantship
- Part-time (20 hours/wk) internship in Fall, Spring Semesters.
- Supervised by State Farm in their Athens, GA office
- Pipeline to a full-time position at State Farm after graduation

Departmental Events

- Colloquium Series
  - Invited speakers give talks on research on methodology and applications of statistics and data science.
  - Approximately 8-10 Thursday afternoons/semester
  - Refreshments beforehand for socializing
- Bradley Lecture, UGA-Clemson Colloquium
  - These are like colloquia, but speakers are especially prominent people and event includes dinner and, typically, a second after-dinner lecture.
- Industry Days
  - Once or twice/semester.
  - These involve visitors to recruit and/or talk about opportunities in their company/industry.
  - Provide insight about careers and professional life outside of academia.

Departmental Events

- Georgia Statistics Day
  - A one-day conference rotating b/w UGA, Georgia Tech, and Emory.
  - Attracts statisticians from all over the state and beyond.
  - A great opportunity for students to present their research and compete for research prizes.
  - UGA hosted this event recently on Oct. 31, 2025.
- Stat Club Events
  - Stat Club is a student-run organization catering to undergraduate and (especially) graduate students in statistics and data science.
  - It helps organizes the Bradley event, Industry Days, the Departmental Picnic, Ice Cream Socials, International Potluck, study sessions, social outings, and more.

A Student Perspective

- Comments from Andrew Mosbo
  - 3rd year PhD student
  - President, UGA Stat Club

Degree Programs: MS-STAT

Program typically requires 1.5 to 2 years of study

Courses:

- 5 required + 6 elective 3-hour courses; maintain GPA of 3.00 or higher

Core requirements (5 Courses)

- Applied Linear Models: STAT 6420-6430
- Mathematical Statistics: STAT 6510-6520
- Consulting: STAT 8000

Elective requirements (6 Courses)

- Non-thesis option: Choose 6 electives and pass Qualifying Exam (85%)
- Thesis option: Choose 4 electives, 2 STAT 7300, write a thesis (15%)

Qualifying exam:

- Offered in May and January
- Two-day take-home exam focused on data analysis

Degree Programs: Secondary MS-STAT

- Same requirements as MS-STAT
- Typically earned by students pursuing a PhD in another discipline
- Program typically requires 2-3 years of study
- Application process is easier and less expensive because applicants are already enrolled at UGA

Degree Programs: MS-DSCI

Program typically requires 1.5-2 years of study

Courses:

- 4 required (14 hrs) + 4 electives (14 hrs); maintain GPA of 3.00 or higher

Core requirements (4 Courses)

- Foundations of DS, DSII (4 hrs each)
- Applied Linear Models (3 hrs) or Inference for DS (3 hrs)
- Advanced Stat Applications and Computing (3hrs)

Elective requirements (4 Courses)

- Two from CSCI (4 hrs each)
- Two from STAT (3 hrs each)

Master's Project or Master's Thesis:

- Can be done with an advisor from STAT or CSCI
- Thesis: STAT/CSCI 7300
- Project: STAT/CSCI 7200

Degree Programs: PhD in Statistics

Typically requires 5 yrs of study (4 if previous MS)

- Must maintain GPA ≥ 3.00 in courses counted toward degree

- 1st year:
  - Appl Linear Models
  - Linear Model Theory
  - Statistical Learning
  - Mathematical Statistics
- 2nd year:
  - Probability Theory
  - Advanced Inference
  - Statistical Computing
  - Advanced Statistical Models

- Qualifying exam:
  - Offered in early August
  - In-class theory component plus take-home data analysis component
- Comprehensive Exam
  - Administered by advisory committee in 2nd or 3rd year.
  - Written and oral component
- Dissertation:
  - Proposal in 3rd or 4th year
  - Defense in 5th year.

Admission

A very useful webpage:

https://www.stat.uga.edu/prospective-graduate-students-0

Admission Requirements:

- Departmental Minimum Requirements for Admission.
- Graduate School Minimum Requirements for Admission.

Deadlines:

- Check the webpage above for the most updated information.

Applying Online and Instructions:

- Examples of some needed documents: GRE, official TOEFL (or IELTS) scores (if applicable), Resume (CV), Statement of Purpose, Transcript(s), three letters of recommendation.
- What we are looking for: demonstrated excellence in mathematical and statistical foundations.

Acceptance Decisions

Two-fold process:

(1) Department

- Academic department faculty review applicants
- Department submits acceptance recommendations to the Graduate School

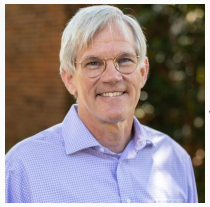
(2) Graduate School (GS)

- GS reviews files of applicants recommended for acceptance
- If GS approves department decision, applicant is admitted
- Applicant receives official acceptance letter from Grad School

Most decisions for Fall are likely to occur in February

If You Need Help

https://www.stat.uga.edu/graduate-degree-programs
https://www.stat.uga.edu/prospective-graduate-students-0



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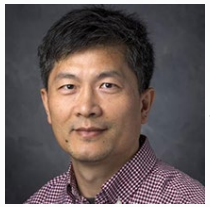

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https://www.stat.uga.edu/
https://grad.uga.edu/

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Questions?