School of Data Science
UNC CHARLOTTE

A MESSAGE TO
DATA SCIENCE NINERS
FROM THE SCHOOL OF DATA SCIENCE

Important
UPDATES

Focus on Academic Integrity

According to the Student Conduct and Academic Integrity office, there has been a steep increase in academic integrity violations, in particular, cheating and plagiarism, since moving to a virtual learning environment.

On one hand, the increase may be attributed to the ease of cheating in an online testing environment and easy access to unauthorized materials. On the other hand, the increase may have been due to the technology that detects suspicious cases, such as test monitoring software or automated plagiarism checking tools.

But, it could be partly true that students' unawareness of the code of student conduct played a role. Hence, you are encouraged to check out the university policies and procedures available at https://scai.uncc.edu/academic-integrity in order to avoid unintended violations and consequences.

It is also important to note that increased stress during the pandemic may have been a contributing factor. The university has great support services, such as free counseling, and you can find more information about these services at (click on resources):

- Center for Counseling and Psychology Services
- Writing Resources Center
- University Center for Academic Excellence (Undergraduate resource)

Question Regarding Your Fall Tuition Bill?

As many of you know, graduate students enrolled in the DSBA and HIA programs are charged a special School-Based Tuition Increment (SBTI). This is an additional per-term assessment based on the number of enrolled credit hours each semester. In the past, Early Entry students had this fee automatically waived while they were classified as undergraduates. Students who were dually enrolled in the Certificate and MS program were only charged the SBTI once. Over the summer there was a change in how these fees are coded. As a result, it appears that some students may have a double charge for increments if they are enrolled in more than one academic program. You should only have one charge for the tuition increment. We requested the first round of waivers in late July. *PLEASE CHECK YOUR BILL FOR ERRORS.* If you feel that there is an error, please contact Student Accounts first to confirm the error. Once confirmed, you can contact the Director, Josh Hertel to request a new waiver.

Graduate students enrolled in **dual-degree programs are initially billed tuition increments for both programs**. However, SDS and our partner programs have agreed to waive one of the increments per term. Students are responsible for contacting the appropriate program to request a waiver for one of the tuition increments each semester, ideally at the time of registration. After we forward the waiver request to student accounts, the charges for both increments will remain on the student's account until the add/drop deadline has passed, but the student's registration will not be dropped for nonpayment of the waived amount.

Fall 2021 Internships: DSBA and HIA Students

If you are still *actively seeking a fall 2021 internship* please fill out the internship form and upload a current resume **HERE**. We will share your information with potential employers as they contact us.

You will need authorization to register for the internship courses (HCIP 6400 or DSBA 6400). We cannot issue authorizations until your project proposal is reviewed and approved by the faculty. Ideally, proposals for fall internships

should be submitted by Monday, August 9th, two weeks prior to the start of classes. The final deadline to register for the fall internship course is drop/add- Monday, August 30th.

Requirements for the internship can be found on their respective websites under the *Curriculum* tabs:

Data Science and Business Analytics Internship

Health Informatics and Analytics Internship

Welcome New and Returning Students

Welcome one and all. We have a lot of special events scheduled across the campus for our new and returning, graduate and undergraduate students.

Graduate School Virtual Orientation
Thursday, August 19, 2021 | 4:00 PM
All new students are encouraged to register and attend the UNCC Graduate School Virtual Orientation.
Attend to hear a welcome message from the Graduate School Dean and Associate Dean, learn more about services offered by the Center for Graduate Life, and join a Q&A with a panel of continuing graduate students. Please click HERE to be directed to the information and registration page.

School of Data Science (SDS) Virtual Orientation & Town Hall
Friday August 20, 2021 | 4:00pm – 5:30pm
The School of Data Science invites all new and continuing DSBA and HIA students (Masters, Certificate, and Distance Education) to this virtual session. During this session, students will learn about how to prepare for the first semester, class expectations and other aspects of each program along with a Q & A session with the school's faculty and staff. You will learn more about the in-person social and professional networking events planned for the Fall semester.
Save the date and stay tuned for Zoom link information.
Registration link: https://www.eventbrite.com/e/fall-2021-virtual-orientation-town-hall-tickets-156948239409

New Student Convocation
Sunday, August 22, 2021 | 6:00pm – 7:00pm
We are excited to bring back the annual in-person tradition ofNew Student Convocation. All students from the class of 2024 (sophomores), our incoming

class of 2025 (freshman), and new transfer students are invited. New Student Convocation is a day dedicated to welcome and introduce new undergraduate students to UNC Charlotte and learn what it means to be a 49er. The event presents the traditions of the institution, the Noble Niner Honor Code, a faculty keynote address, and a performance by the Pride of Niner Nation Marching Band.

Goldrush Event: School of Data Science
Monday, August 23, 2021 | 4:00pm - 5:00 pm
The School of Data Science is holding a Data Science Meet and Greet as part of the Goldrush events welcoming new undergraduate and graduate students. The event will be held in the Bioinformatics second floor lobby. The event is a casual affair for students to grab a slice of pizza and some SDS swag and create recognition for the program.

Fall Course Registration for Fall 2021

If you have not already registered, classes are filling up for the fall semester. Please reach out to your advisor ASAP to set up an appointment.

HIA and DSBA Graduate Students- Set up an advising session with either [Brenda Bradrick](#) or [Josh Hertel](#).

Data Science Undergraduate Students- Please set up a session with your advisor: [Dr. Angela Berardinelli](#), [John Tobias](#), or [Dr. Doug Hague](#)

Fall Electives and Special Topics Courses-Graduate Level

We have several electives and two special topics courses offered this fall including:

DSBA 6520: Network Science - Dr. Siddharth Krishnan - Fall 2021
DSBA Data Science Elective
Graphs or networks are ubiquitous structures that appear in a multitude of complex systems like social networks, biological networks, knowledge graphs, world-wide-web, transportation networks, and many more. Real-world networks are massive and unstructured, apart from dynamic and multi-modal. Many existing domains can benefit from data analysis modeled as network-driven problems that provide many computational and algorithmic challenges. This course covers recent advances in the structure and analysis of large networks, and machine learning models and algorithms that abstract their basic properties. Network Science can forecast growth trajectories and develop predictive and descriptive applications. The course will explore how to practically analyze large-scale network data and how to reason about it through models for network structure and evolution using techniques from data mining and machine learning. The course will also feature several guest lectures from thought-leaders at LinkedIn, Pinterest, and Twitter, They will discuss possible internship opportunities for students adept in network science. ***Open to HIA and DSBA students***

HCIP 6392 Health Data Integration - Dr. Yaorong Ge - Fall 2021
Provides a systematic understanding and experience of foundational concepts and techniques for data integration in healthcare. Topics include: heterogeneous data sources in healthcare, health data interoperability, health communications standards, health data standards, health data integration architecture, and health data integration models and techniques, including data preparation, health data integration tools, and health information exchange. *Open to HIA and DSBA students*

HCIP 6396 Business Intelligence in Healthcare - Dr. George Shaw - Fall 2021
Business Intelligence is a collection of computer-based techniques used to extract, identify and analyze data. Analytics is key in the transformation of the healthcare industry. Healthcare business intelligence can provide organizations with the ability to improve quality of care, increase financial efficiency and operational effectiveness, conduct innovative research, and satisfy regulatory requirements. Business Intelligence provides better access to information. It provides current and predictive views across the enterprise. Common functions of BI are reporting, data mining, analytical processing, knowledge management, and data visualization. Topics include: elements of business intelligence, business analytics, data visualization, data mining, data warehousing, and business performance management. *Open to HIA and DSBA students*

DSBA 6010 Special Topics in DSBA: Data Privacy - Dr. Liyue Fan - Fall 2021
DSBA Data Science Elective
Today's personal data is aggregated at large scales, increasing the risk of privacy violations or breaches in critical sectors (e.g., health care, automation, and finance). Current laws such as HIPAA and GDPR protect personal data in the United States and around the world. The course will cover privacy-enhancing technologies from data de-identification to state-of-the-art differential privacy research (e.g., deployed at Apple and the Census Bureau). We will also include broader discussions around topics such as data governance, ethics, and algorithm fairness. The material will touch on issues and methodologies from data mining/machine learning, databases, cryptography, distributed systems, law, policy, medical informatics, and statistics. *Open to HIA and DSBA students*

DSBA 6010 Special Topics in DSBA: Text Mining and Information Retrieval - Dr. Sunshine Niu - Fall 2021
DSBA Data Science Elective
This course covers general computational techniques for analyzing large amounts of text data as well as basic techniques for information retrieval. By introducing text mining (TM) and information retrieval (IR) in a unified framework, this course emphasizes the importance of integration of IR and TM needed to build the two major types of text information systems, i.e., search engines (such as Google, MS Bing, etc) and text analytics systems, for text information access and text analysis. This course intends to provide a systematic introduction to many of these approaches, such as word association mining, text classification, text summarization, probabilistic topic modeling, and opinion mining. Students are expected to have basic knowledge about computer science, particularly some programming languages, and be

comfortable with some basic concepts in probability and statistics such as conditional probability and parameter estimation. ***Open to HIA and DSBA students***

Fall 2021 Graduation Application Deadline: HIA and DSBA

REQUIREMENTS TO BE ELIGIBLE TO GRADUATE
The deadline to apply for summer graduation has passed. All students (Master's or Certificate) who plan to graduate this fall must apply for graduation by no later than **Wednesday, September 22, 2021**.
To be eligible to apply for graduation students:
1. Must be enrolled during the Fall 2021 term.
2. Complete the online graduation application by the deadline (Wednesday, September 22, 2021).
3. Be on track to complete all the course requirements for your academic program by the end of the Fall 2021 term.

More information on the DSBA process can be found HERE.
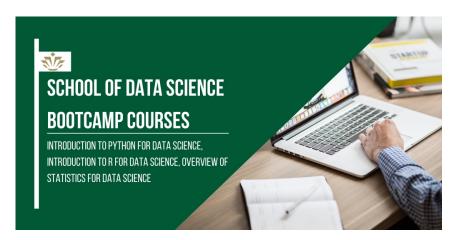More information on the HIA process can be found HERE.

Career Center Offers Free Professional Headshots for Faculty and Students

Give your professional image a boost on LinkedIn with a headshot. Having a professional headshot gives strength to your personal brand. There's no charge for the headshot program, and it is open to all current UNC Charlotte students, faculty/staff, and alumni.

Learn More Here

SDS Bootcamps- Relaunching for Fall 2021

All three of the current SDS boot camps (Python, Statistics, and Introduction to

R) were reviewed this spring. Registration for the Fall Semester SDS Boot Camps will open for students on Monday, August 2nd. These training modules are open to all students actively enrolled in the DSBA or HIA programs. These online courses were created as a free resource for students. They are intended to be utilized as introductory or foundational review tools. Please share this with your students. More information about the courses can be found here:

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SDS Bootcamps

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Students currently enrolled in the summer 2021 sections must complete the bootcamp by Tuesday, August 17th, 2021.

Burtch Works Jobs Report

Burtch Works is an Executive recruiting firm that produces regular research and insights on trends in the data science marketplace. They specialize in marketing research, marketing science, credit and risk analytics, data science, and direct and digital marketing for a wide range of businesses and industries.

Check out their latest reports on Data Science & Analytics Salaries, Hiring Research, & Market Trends.

Webinar recording: https://youtu.be/PDXizL0Grck

Full report and slide deck: http://www.burtchworks.com/study

Looking for more info on current trends? Check out the additional links below:

1. Growing salary, education, and industry trends we're highlighting this year: https://www.burtchworks.com/2021/06/21/new-report-5-growing-data-science-analytics-trends/
2. Our latest hiring survey results for data science & analytics teams in Q3/Q4: https://www.burtchworks.com/2021/06/15/survey-results-2021-data-science-analytics-data-engineering-hiring-in-q3-q4/
3. Key data scientist skills for positions we're hiring for in 2021: https://www.burtchworks.com/2021/06/08/12-key-data-scientist-skills-in-2021/

SDS Student Organization Upcoming Events

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Save the Date

Saturday, November 6, 2021
The First Annual SDS Football Tailgate Party

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Graduate, Undergraduate Students, and Alumni along with Faculty and Staff are invited to this outdoor event.
MORE DETAILS TO COME

Are you interested in becoming a mentor to another graduate student?

The SDS Student Organization is looking for graduate students to become mentor-buddies for incoming students.

Please let us know if you are interested in becoming a mentor by clicking on the Mentor-Mentee Initiative

Sports Analytics Summer Practicums

This summer student's in John Tobias' Sports Analytics course partner with several local teams and ESPN gaining valuable "on-the-field" experience. You can watch the students as they work with the Carolina Panthers and ESPN.

On-Campus Job Fair

The University Career Center will host a Virtual On-Campus Job Fair for student employment jobs on ***Tuesday, August 3rd.*** The virtual job fair is an opportunity for students to find on-campus positions, and partake in a virtual fair before returning to campus. There will be FWS (Federal Work-Study), STW (Student Temp Wage), UPIP (University Professional Internship Program), and Graduate Assistant positions.
Job Fair Details:
Event: Virtual On-Campus Job Fair
Date: Tuesday, August 3rd
Event Time: 11:00AM-2:00PM
Location: Virtual Career Fair Platform
Registration: On-Campus Job Fair, Click **RSVP on Hire-A-Niner**, then Select from I want to attend: **As A Job Seeker**

> # Click "View entire message" below for more upcoming events and August job opportunities!

NCTech Present Women in Tech Panel Discussion

Join us ***Thursday, August 19 at 9-10 AM*** for a dynamic and interactive virtual session featuring Martha Gleason as you learn presentation strategies to ignite speaking impact during these changing times:

- Two quick and powerful "mind-body connection" tools to bust camera anxiety and shine in the virtual room.
- Three video impact strategies you can start using right away to ace virtual presentations and own the virtual room.
- Two messaging tools for powerful introductions and interesting starters always at the ready.

This webinar is free for NC TECH Members and $25 for non-members.

Internship Panel Discussion: Preparing for the Internship: DSBA and HIA Students

Wednesday, September 8, 2021 | 4:00pm - 5:00 pm
This panel discussion will include students and faculty. The focus will be on identifying and securing a spring 2022 internship placement. Dr. Hague and Dr. Odum will present on do's and don't of the internship proposal process.

Featured Job
OPPORTUNITIES

Hire-A-Niner: Job and Internship Resources

HIRE-A-NINER

The Career Center has developed a special aggregating tool for Data Science students looking for internships or full-time placements. All postings in Hire-a-Niner that mention analytics or data science can be found with one click. There are a few odd postings, but in the main, there is a rich stream of HIA, DSBA, and DS postings to be found.

Bookmark the Site Today!

Volunteer Opportunity - Center for Graduate Life: Apply to Become a Graduate Life Ambassador

Graduate Life Ambassadors (GLA) are volunteers who help plan Center for Graduate Life (CGL) events, promote events/programs to fellow students, and suggest new initiatives for the CGL.

As a GLA you will:
- Have the chance to impact the graduate student experience at UNC Charlotte
- Have service opportunities to include on your resume/cv and stories to talk about in your interviews
- Get free food and swag
- Be a part of a positive, supportive, and driven community

Interest Form

Research Scientist - Health Informatics Research

NORC at the University of Chicago is seeking a talented Research Scientist to support a growing portfolio of high-profile health informatics projects within its Health Sciences Department.

Successful candidates may come from a wide range of professional backgrounds including research, policy analysis, consulting, health care administration, health informatics, academia or health care delivery. Successful candidates will have familiarity with health systems such as electronic health records, health information exchange, consumer health informatics, and clinical decision support, and/or significant experience in social research on health IT adoption and policy.

This position is responsible for providing direction and task leadership in all aspects of project work which could include the development of analytic approaches, questionnaire design, data collection strategy, acquisition of existing data, data analysis, and/or preparing study conclusions and developing high-quality reports.

Apply Here

Presidential Management Fellows (PMF) Class of 2022 Application Cycle

The Presidential Management Fellows (PMF) Program is administered by the U.S. Office of Personnel Management (OPM). The PMF Program is a leadership development program at the entry-level for advanced degree candidates in STEM fields. As such, students in the DSBA and HIA PSM programs are well-positioned to apply for this program. The Program attracts and selects the best candidates possible, but is really designed with a more narrow focus - developing a cadre of potential government leaders. It provides some sustenance during the first years of employment and encourages the development of leadership capabilities. The PMF Program inculcates a lasting bond as well as a spirit of public service, ultimately encouraging and leading to a career in the government.

The PMF Program Office has announced the dates for the upcoming PMF Class of 2022 Application:

- **OPENS-** Tuesday, September 28, 12:00 pm (EST)
- **CLOSES-** Tuesday, October 12, 2021, 12:00 pm (EST).

These dates have been posted here: https://www.pmf.gov/become-a-pmf/2022-application/. PMF Class of 2022 Finalists will be announced approximately six weeks after the application closes. Please monitor the webpage for updates.

For the 2022 PMF application cycle, a revised assessment has been introduced to improve the process in a variety of areas including addressing concerns around equity. PMF is also enhancing recruiting efforts with greater outreach to diverse communities, including expansion of their engagement with Minority Serving Institutions, enhanced recruitment through the alumni network, and use of strategic recruitment platforms.

The updated "PMF Applicant Handbook" is posted on the PMF website. The Handbook details the annual application process, explains eligibility requirements, required documentation, and provides an overview of the online assessment process, all with the goal of preparing prospective applicants to submit successful applications.

Sia Partners - Hiring for Full-Time Positions

SIA Partners, a global consulting firm, has been tasked to develop a new AI/ML and NLP tool(s) to support regulatory reporting and automate their regulatory testing which is very manual today. In addition, they are looking to support their Structured Credit Products team as well as their IA/ML and Analytics team. **Apply by no later than Friday, August 6th.**

Senior Data Scientist/ Key responsibilities:

- Leverage AIML techniques particularly in the field of Natural Language Processing to build models that extract relevant information from unstructured data sources
- Leverage distributed computing to build performant models on the cloud.
- Build AIML pipelines with model validation, model monitoring, model scoring, model decay, and retraining. Experience with operationalizing AIML models is highly valued.

Key Requirements:

- A Ph.D., or Master's Degree with equivalent work experience, with a solid background in machine learning, statistical analytical techniques, quantitative or evidence-based research.
- Advanced Knowledge of Python, Scala or Java
- 3+ years of professional experience and discipline in building Machine Learning models
- 3+ years of experience in Statistics and Data Science techniques like exploratory analysis, feature engineering, and ML techniques like clustering, regressions, classifications, etc.
- Experience with machine learning packages such as NLTK, Spacy, genism, fasttext, TensorFlow, PyTorch, Keras, Scikit-Learn, NumPy, SciPy, Pandas, StatsModels, Spark ML

- Exposure to Machine Learning techniques like hyper parameter tuning, model validation, model serving, model monitoring, retraining, etc. (Machine Learning pipeline)
- Experience with machine learning lifecycle tools (i.e. mlflow, kubeflow)

Preferred Skills/Experience:
- Relevant hands-on work with raw, semi-structured or unstructured data sets
- Experience working in teams of analysts, data engineers, statisticians, and data scientists
- Knowledge of BERT, AllenNLP, Spark, Hadoop, H20, and/or cloud computing

Apply Here

DegreeWorks Audit: On Track To Graduate?

DegreeWorks is a web-based planning tool that provides an accurate display of required coursework and helps students monitor their progress towards graduation. Students can access their real-time audit in DegreeWorks via my.uncc.edu and should routinely check their progress towards degree completion.

For any required courses that are in the Fall Through or Not Counted sections of DegreeWorks, submit an Academic Petition that requests the courses be counted towards your program requirements. If you believe your audit contains errors or the requirements do not match the catalog, students should contact:
Josh Hertel: jhertel@uncc.edu
Brenda Bradrick: bbradric@uncc.edu

If you began in the Certificate program and transferred to the Master's program, please review your DegreeWorks for both your certificate and master's program and complete an application to graduate from both programs.

Who to Contact for Academic Advising and Questions
All new students please set up an advising appointment before registering. ***Carly Mahedy, Director of Student Services, is on leave for the Summer and will return in the Fall.***

Health Informatics and Analytics (HIA) Program (Including Distance Education)
- Email: bbradric@uncc.edu
- Catalog/Curriculum: https://hia.uncc.edu/curriculum/course-catalog
Data Science and Business Analytics (DSBA) Program
- Catalog/Curriculum: https://dsba.uncc.edu/curriculum/course-catalog
Early Entry (DSBA or HIA)
- Email: jhertel@uncc.edu
Catalog/Curriculum:
- HIA Early Entry
- DSBA Early Entry
Advising on Internships for DSBA or HIA

- Email: jhertel@uncc.edu

Authorization for Course Registration DSBA or HIA Distance Education
- Email: either Brenda bbradric@uncc.edu or Josh jhertel@uncc.edu

General Advising Questions
- Email: either Brenda bbradric@uncc.edu or Josh jhertel@uncc.edu

Graduate Student Facebook Group

School of Data Science
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