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### **Welcome From the Executive Director**

Dear faculty of the School of Data Science,

The summer flies by. Welcome back to the school!

As the Interim Executive Director of this dynamic institution, I am both honored and thrilled to be part of the school that is at the forefront of innovation and discovery in one of the most transformative and exciting fields of our time. As we continue growing and solidifying our academic programs (We now have approximately 800 undergraduate and graduate students in the School of Data Science, with more than 1,000 alumnus), we will recruit new talents (both tenure-track and non-tenure-track faculty), increase interdisciplinary research collaborations, and strive for research excellence in data science and Al. We will also strengthen our relationships with industries and local communities to make a meaningful impact on the real world.

I encourage you to take full advantage of the resources available to the school faculty, participate actively in our vibrant community, and never hesitate to share your ideas/suggestions or reach out for support. I look forward to witnessing your achievements and celebrating your successes in the upcoming 2024-25 academic year.

Warm regards, Dongsong Zhang, Ph.D.



# Electives and Special Topics: Spring 2025 Schedule Build

The SDS undergraduate and graduate programs have a rich set of special topic offerings for Fall 2024. Here is the up-to-date list of classes. Please feel free to share this with students.

SDS Special Topics List

# Mentor Training for UNC Charlotte Faculty: Fall 2025

NSF now mandates mentor training for PIs and graduate students on funded grants. We have long encouraged faculty to complete this training, and nearly 300 have done so. <u>Fall Mentor Training dates are now available</u>. Please encourage your faculty to sign up for one of the workshops. While the training is free, space is limited, so please ensure they register only if they can fully attend. Thank you for supporting improved mentoring on campus!



Now accepting applications for the 2025 Complexity Postdoctoral Fellowships

Complexity Fellows contribute to SFI's research and collaborate with leading researchers worldwide, *X/Twitter, Santa Fe Institute* from July 29, 2024 If you've completed your PhD in any scientific discipline, and are interested in transdisciplinary research, consider this unique opportunity at the Santa Fe Institute." The deadline for applications is October 11. More information

### NIST releases a tool for testing Al model risk

TechCrunch, Kyle Wiggers from July 27, 2024: "Called Dioptra (after the classical astronomical and surveying instrument), the modular, open source web-based tool, first released in 2022, seeks to help companies training AI models — and the people using these models — assess, analyze and track AI risks. Dioptra can be used to benchmark and research models, NIST says, as well as to provide a common platform for exposing models to simulated threats in a 'red-teaming' environment." More information



Find the full **SDS Calendar of Events** on the program website.

- August 12: Academic Year Begins
- August 15: <u>University Convocation</u>
- August 18: New Student Welcome and Chancellor's Cookout
- August 19: First day of classes Fall Semester
- August 26: Last day to add/drop course
- August 27: Second cancellation for non-payment



### **University Convocation**

<u>University Convocation</u> is a time for faculty and staff to celebrate the start of a new academic year and learn about key priorities and initiatives for the University. It also allows us to hear directly from the faculty, staff, and student body presidents. It will be held on August 15 at 10:00 AM in Popp Martin Student Union room 340. The following convocation will be the General Faculty Meeting in the form of a question-and-answer session with Faculty President Xiaoxia Newton (presiding), Provost Jennifer Troyer, and Chancellor Sharon Gaber. All are welcome.

# **Brew + Bytes (Charlotte)**

August 15, 2024 | 4:30 - 6:30 p.m.

Join NC TECH for a Brews + Bytes in Charlotte! This event aims to bring together our network in a casual, intimate setting to connect. Register Here.

# The Biomedical Sciences Symposium Advancing Frontiers: Exploring New Horizons in Biomedical Sciences

September 9, 2024 | 9 a.m. to 5 p.m. | The Dubois Center at UNC Charlotte Center City

UNC Charlotte, in collaboration with NCBiotech, is hosting "The Biomedical Sciences Symposium: Advancing Frontiers: Exploring New Horizons in Biomedical Sciences" in Uptown Charlotte. This full-day event will bring together the University and Industry to highlight the innovation and translational research in Biomedical Sciences in the region. The symposium will serve as a catalyst for driving forward transformative solutions to pressing health challenges, reinforcing UNC Charlotte's commitment to excellence in biomedical education and research. Learn about breakthrough discoveries, enjoy interactive panel discussions, network, and more! Watch for further communication on this event and visit our Symposium website to learn more.

Register

# Scaling Up: Developing a Coordinating Hub for Data Competency

September 17, 2024 | 12 p.m. | Virtual

In this session, Dr. Crista Arangala will introduce Elon University's Data Nexus. The initiative was created as part of a five-year Quality Enhancement Plan developed during its most recent accreditation process and serves as a coordinating hub for

data competency initiatives at the university throughout the plan and beyond. In its first year, Data Nexus has been focused on assessing the foundational technology and statistical competency of all of the university's undergraduate students. Additionally, Data Nexus has allowed for the creation of a process for faculty across the institution to apply for courses to be designated as Data-Intensive and the introduction of a new Micro-credential in Advanced Data Competency. Data Nexus offers a variety of programming across campus including data camps, workshops, and data challenges, as well as grants to support faculty, staff, and student data-driven initiatives. In its second year, Data Nexus will continue to develop curricular and co-curricular data-intensive experiences for the general undergraduate student body. (From SouthBigDataHub)

Register

### **Summit for Women in Tech**

September 25-26, 2024 | New Bern, NC

Join NC TECH, presenting sponsor <u>Blue Cross Blue Shield of North Carolina</u>, and women from across North Carolina for the fourth annual <u>Summit for Women in Tech</u> in New Bern, NC, September 25-26. This women-only summit will feature candid conversations with women tech leaders where we explore gender bias, share our unique journeys, discuss how to shift the paradigm and provide insights on advocating for change both now and for the next generation. <u>Full details and registration</u>.

# NCHIMSS Annual Conference: Building the Future of Healthcare Together

October 10-11, 2024 | Wrightsville Beach, NC

The North Carolina Chapter of the Healthcare Information and Management Systems Society (NCHIMSS) aims to enhance healthcare in North Carolina through information and technology. We offer distinctive educational and networking opportunities for healthcare providers and IT leaders across the state, promoting the exchange of ideas to tackle the evolving challenges in healthcare. Join us at our annual conference to network with top professionals and advance your knowledge in healthcare IT! Register here.

### 2024 INFORMS Annual Meeting

October 20-23, 2024 | Seattle, WA

This meeting will host thousands of presentations, tutorials, and pre-meeting events, highlighting the latest research and advancements in operations research and analytics. Discover how these disciplines are making a significant impact by saving lives, optimizing resources, and solving complex challenges. For more information

### ADSA'24

#### October 29-30, 2024 | Ann Arbour, MI

ADSA'24, hosted by the Michigan Institute for Data Science, will focus on humanity in data and AI. This includes humans as data producers and engineers, AI designers and developers, representations of humans in data, and humans as users or beneficiaries (or victims) of data and AI. Sessions will explore the central role of humans in the data and AI revolution, including maximizing benefits for research and innovation, ensuring that the use of data and technologies align with our values and priorities, and preparing the future workforce for continued discovery and innovation. More information here.

### Data Science Education K-12: Research to Practice Conference

#### February 17-19, 2025 | San Antonio, TX

Papers due August 1: Through collaborative sessions, innovative formats, and a supportive community, this inaugural conference will offer a dynamic atmosphere for educators, researchers, curriculum developers, and school leaders to exchange ideas and co-create the future of data science education in K-12. If you are an educator, researcher, content and/or tool developer, school leader, or policymaker excited to share ideas, learn from colleagues, and jointly pave the way toward robust data science education and data literacy opportunities for K -12 learners, then this inaugural conference is for you. Don't miss this opportunity to say you were there at the beginning of this exciting new chapter in education. (From South Big Data Hub)

**More Information** 



# Dongsong Zhang New Interim Executive Director of SDS

We're thrilled to share some big news about the School of Data Science! SDS is

now a full unit within the University, reflecting the growing importance of data science in various fields and industries. This transition is driven by our rapid growth —from 180 students to over 750, across five programs including a new PhD and BS degree. To better support our expanding community, we'll be increasing our faculty and enhancing our programs.

As of May 15th, Dr. Dongsong Zhang stepped in as the Interim Executive Director, guiding us through this exciting period of change. Expect to see more transdisciplinary collaborations, new faculty joining, and even more opportunities to engage with cutting-edge data science initiatives. We're committed to continuing our role as a leader in data science education and research, and we can't wait to embark on this new journey with you!

# New Director of Research for the SDS: Dr. Jason Windett

The School of Data Science welcomes Dr. Jason Windett as its new Director of Research, effective July 2024. He is taking over the role of Dr. Dongsang Zhang, the new Interim Executive Director for the School. With a joint appointment as a Professor of Political Science, Public Policy, and Data Science, Dr. Windett brings extensive expertise in American politics and data-driven research. Read more here!

### New Executive in Residence: Agus Sudjinato

Agus Sudjianto, a highly accomplished risk management and quantitative methods expert with extensive experience in the financial services industry, is becoming an Executive in Residence for the School of Data Science. He will also be co-teaching a class on MLM with Professor Robert Fox this fall at SDS. Agus recently retired as Executive Vice President and Head of Corporate Model Risk at Wells Fargo, where he served for over 11 years. Read more here!

# Welcome to the SDS- New Faculty!

Summer often brings change, and this year we're excited to welcome several new faculty members to SDS. You can learn more about them on their individual faculty websites.

#### **Michael Schuckers**: Professor

Dr. Michael Schuckers joins UNC Charlotte as a professor, with deep expertise in sports data science. His research in ice hockey analytics and bioauthentication technologies has earned recognition from the American Statistical Association.



#### **Michael Korvink**: Adjunct Faculty

Michael Korvink is a Principal Data Scientist at Premier Inc., specializing in integrating Social Drivers of Health (SDOH) into healthcare analytics. With over a decade at Premier, his research on SDOH's impact on hospital rankings advocates for equity in healthcare. Michael also instructs at UNC Charlotte and pursues a Doctor of Public Health at the Medical College of Wisconsin. He will be co-teaching HCIP 5376 Introduction to Programming for Health Informatics this fall.



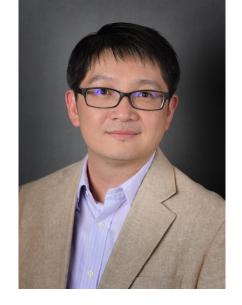
#### **Sydney Westfall**: Adjunct Faculty

Sydney Westfall is a Data Scientist at Premier Inc. She specializes in and develops statistical models to enhance hospital performance. Her work on PINC AI™'s Clinical Health and Social Needs Index underscores her commitment to improving healthcare through data-driven insights. She will be co-teaching HCIP 5376 Introduction to Programming for Health Informatics this fall.



#### **Shih-Hsiung Chou**: Adjunct Faculty

Dr. Shih-Hsiung Chou is a data scientist with deep expertise in big data analytics, machine learning, and artificial intelligence. He is currently a Senior Data Scientist at Advocate Health, where he utilizes advanced analytics to drive strategic decisions and enhance operational efficiency. Dr. Chou has held key positions at Atrium Health, where he specialized in predictive modeling, data visualization, and Al solutions.



# Siddharth Krishnan Receives New Army Research Office Grant

Along with Dr. Cori Faklaris from the SIS department, Siddharth Krishnan received an ARO grant to fund two PhD students for a minimum of \$482,882 over 3 years. Siddharth used the SDS seed grant he was awarded in 2021 to assemble the preliminary results for the proposal submission. This project aims to develop new ways to identify and understand the spread of extreme views in digital media and to examine how these views differ from those that cause real-world or online harm. By improving methods to categorize extreme opinions, misinformation, and harmful speech, this project will advance the strategies used to address harmful, false, and/or inciting speech without censoring lawful or useful speech. Congratulations Siddharth!

# **Agus Sudjianto Will Present at Ai4 Conference**

Along with Ying Li, Rahul Singh, and Tarun Joshi, Agus Sudjianto researched a more efficient way to test Natural Language Processing models. Their paper shows an automated process for developing test cases for these models. Read their paper here. He will be speaking at the Ai4 Conference next week in Las Vegas, NV. Congratulations Agus!



# Important Announcement: Presidential Management Fellows (PMF) Class of 2025 Application Cycle

The PMF Class of 2025 Application Cycle will open in just over a month.

- Opening: Noon (Eastern Time) on Wednesday, September 4, 2024
- Closing: Noon (Eastern Time) on Wednesday, September 18, 2024

Please mark your calendars and share this information and share it with students. For more details, visit <u>PMF 2025 Application Dates</u>. The "2025 PMF Applicant Handbook" is now available on our website. This comprehensive guide covers the application process, eligibility, documentation, and assessment overview. Access the Handbook under the "Academia/Resources" section <u>here</u>. There will also be **Academic Stakeholders Meetings**: We invite academic partners (career services staff, deans, department heads, faculty, etc.) to our online webinars:

- Academia Info Session 1: Monday, August 5, 2024, from 1:00-2:30pm (Eastern Time) <u>Join Here</u>
- Academia Info Session 2: Friday, August 23, 2024, from 1:00-2:30pm (Eastern Time) <u>Join Here</u>

These sessions will cover the PMF Program, the 2025 application process, and timelines. Note that these webinars are intended for academia stakeholders only and will not be recorded.

**Webinars for Potential Applicants**: Throughout August 2024, PMF will also host informational webinars for potential applicants. These will provide an overview of the PMF Program and details about the 2025 application cycle. The schedule will be posted on the PMF 2025 Application section of our website. Thank you support and assistance in spreading the word.

# Burtch Works 2024 Data Science & Al Professionals Salary Report



Burtch Works is a specialized Data, Analytics, and Technology talent solutions and insights company. They just released their <u>annual survey and report</u> on market

trends in the field for 2024. The 2024 report includes an analysis of salaries across job levels and industries, demographic insights, and industry developments regarding data science and All. They also have a website with all kinds of resources for job seekers.

The NC Technology Association (NC TECH)

### **Latest Report on the IT Job Landscape**

The NC Technology Association (NC TECH) has unveiled its latest update on the state's IT job landscape through its new, comprehensive <u>IT Job Trends Dashboard</u>. NC TECH reports continued growth in IT job postings for March, the fourth



month in a row. This generally aligns with the Bureau of Labor Statistics report showing overall US job growth. Additionally, a survey by NC TECH found that tech leaders in North Carolina are optimistic about growth in the next quarter, with a majority planning to hire new employees. Read More Here.



## **AWS Academy**

AWS Academy, formerly AWS Educate, is a no-cost program by Amazon Web Services (AWS) tailored for higher education institutions. It equips educators with resources to teach cloud computing and AWS services effectively, aiming to prepare students for industry-recognized certifications and careers in cloud computing. The program also includes the AWS Academy Forums, a virtual community where educators can connect, access resources, share best practices, and discuss trends in cloud education. The forums feature specialized groups such as AWS Academy News for program updates and the Educators Forum for AWS-related content and discussions. Educators have the flexibility to customize their notification preferences to stay informed at their desired frequency. If you are interested in learning more or using AWS Academy for one or more of your classes, please email Robert Fox (rfox12@charotte.edu).

# Data Scientist at the Center for Disease Control and Prevention

#### Washington, DC | Applications due September 30

The candidate's responsibilities include: performing assigned portions of professional or technical projects involving some or all duties such as data science to establish objectives and approach; ability to isolate and define critical features of the problem; reviewing, coordinating, and monitoring implementation of policies governing the program area; and incorporating and/or integrating health equity principles and practices in the development of IT infrastructures, algorithms,

concepts, storage, retention, and surveillance programs. <u>Apply here.</u> (From SouthBigDataHub)

# Requests HPC Educational Cluster Accounts for Fall 2024

If you plan to use the UNC Charlotte HPC Educational Cluster for Fall 2024 courses, please complete the account creation request form using the link Account Creation Request Form. The URC staff will process student accounts the day after the add/drop period ends unless instructors need resources in the first week. To ensure timely account setup, please submit your requests as soon as possible. The final deadline for submissions is September 10, 2024, after which the form will be disabled. (Note: The HPC clusters are for course-related work only, not for research. For more details, visit the URC Educational Clusters page.) Feel free to reach out to Joe Matesich or Mark Olson. with any questions. They will coordinate with the OneIT URC staff for account creation.



# From the Washington Post

Who will control the future of Al?- Sam Altman, co-founder and CEO of OpenAl discusses the urgent question is whether the future of Al will be shaped by democratic values and global benefit or by authoritarian control and power consolidation. (July 25, 2024)

# From American Medical Informatics Association's (AMIA) Informatics SmartBrief Newsletter

 Academic researchers need better access to Al tech- Researchers in academic settings do not have as much access to super-computers needed for Al health-related studies, compared with for profit companies, which may make de-



for-profit companies, which may mean data from underrepresented populations are not included in the process. "There's this persistent concern that the data that's being used to train generative AI could have inherent

biases that are almost impossible to discern until after the fact because a generative AI agent can only interpret what it's been given," said Bronson Messer at the US Department of Energy's Oak Ridge Leadership Computing Facility. The National Science Foundation launched the National Artificial Intelligence Research Resource pilot program earlier this year to address this bias. Full Story: Inside Higher Ed (7/14)

Physicians use AI chatbots to appeal insurance denialsincreasingly use AI chatbots for administrative tasks, such as drafting appeal
letters to insurance companies. Radiation oncologist Jonathan Tward said
using the HIPAA-compliant Doximity GPT has reduced the time spent on prior
authorizations by half and, because it uses data from patient medical records
and insurance coverage requirements, the appeals are more successful. <u>Full</u>
Story: The New York Times (7/10)

### Other Newsletters and Resources

Suggestions are always welcomeplease email <u>Lindsay Lennon</u> with any questions or recommendations.



Essential Data- A from <u>Data</u>
 <u>Leaders</u>, a global data solutions firm, targeted to Chief Data

 Officers.



 KDnuggets- KDnuggets is an online site for Data Science, Machine Learning, AI, and Analytics, edited by Matthew Mayo. KD stands for Knowledge Discovery.









 Medium- Medium is an opensource online publishing platform where anyone can publish and share insightful perspectives and useful knowledge. It has a wideranging offering of topics including: Programming, Data Science, Technology, Self Improvement, Machine Learning, etc. In addition to their website, they also publish a daily enewsletter.



- National Consortium for Data
   Science (NCDS)- The National
   Consortium for Data Science
   (NCDS) brings together academia,
   industry, and government to tackle
   21st-century data challenges. It
   aims to leverage digital data for
   creating jobs, advancing
   healthcare, making scientific
   discoveries, and giving industries
   a competitive edge.
- SouthBDHub- The monthly newsletter contains a listing of news, events, and opportunities in data science, analytics, engineering, and policy. A selection of stories and announcements are below



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