SDS students,

We highly encourage everyone to read through this newsletter in its entirety, as there are many reminders and useful pieces of information regarding the Spring 2021 semester.

Thank you all for your hard work throughout the fall semester. We hope you enjoyed a well deserved Thanksgiving break. Let's push through together, as the end of the fall semester quickly approaches.

As always, please reach out to Josh Hertel or Carly Mahedy if you have any questions.
The School of Data Science has joined Coursera for the Campus Basic Plan. DSBA and HIA students will have access to more than 4,000 courses in the Coursera catalog.

Students must request access by completing the google form below. Participants will receive an email confirmation from SDS and from Coursera with an invitation to set up an account.

More information about the program can be found here.

New Special Topics Course Available: Mobility on Demand Systems: Data-Driven Analysis, Simulation, Visualization

Mobility on Demand Systems: Data-Driven Analysis, Simulation, Visualization

ARCH 6306/6050, DSBA 6010, ITIS 8010/6010: Wednesdays 6pm-8:30pm, Taught Online

Dr. Dimitris Papanikolaou | dpapanik@uncc.edu | Urban Synergetics Lab | https://urbansynergeticslab.net

PREMISE
Widely considered as the future of sustainable transport with important implications in architecture and city planning, mobility on demand (MoD)
systems utilize shared vehicles (bikes, scooters, cars, drones), parking spaces, and advanced information technology, allowing users to move from point to point on demand while cities reclaim urban land. Yet, opinions on on-demand mobility are controversial. Some studies claim that sharing enhances accessibility while reducing traffic, parking occupation, and dependence on private ownership. Others, however, show that vehicle-miles travelled and congestion increase due to empty trips for rebalancing, pickup, and electric charging. And while some studies advocate autonomous technologies for intelligently distributing fleet at stations, others favor behavioral incentives for that purpose. This seminar introduces advanced topics and fundamental questions of MoD systems focusing on how data-driven analysis, simulation, and visualization techniques in combination with systems thinking can be used to address scenario analysis questions such as: how would traffic, parking availability or carbon emissions change if a portion of private conventional vehicles were replaced by shared autonomous cabs? How might self-organization be induced and under what circumstances can it outperform centralized control?

OBJECTIVES
Provides foundational skills in data-driven analysis, simulation and visualization of MoD systems using System Dynamics (SD) and Agent-Based (AB) approaches. Students will learn: how to find, collect, process, and visualize urban mobility data; how to use data to model and simulate MoD systems; how to develop interactive web-based visualizations using state-of-the-art tools; how to formulate meaningful research/policy questions and how to use interactive simulations, experiments, and visualizations to explore scenarios for addressing them.

TOPICS
Performance and sustainability of MoD systems in relationship to land use and urban form; dynamic pricing, user behavior, and self-organization; Systems Thinking, System Dynamics, Agent Based Systems, Data Visualization, Modeling and Simulation. Covers basic programming skills in JavaScript, D3.JS, P5.JS, LeafLet/Mapbox, NetLogo, and Vensim.

METHOD
Taught online, the seminar combines lectures, case studies, discussions, lab tutorials, in-class experiments, readings, and student presentations, and is organized into team assignments, a final project and a paper. For final projects, students will select a dataset and MoD system of their interest, identify a research or policy problem, develop a model, and use their model to address their problem. Alternatively, students may develop an interactive web-based visualization platform for exploring data for their selected system. Possible datasets include: trip data from bike sharing systems; taxi trip datasets; e-scooter GPS datasets; subway, bus or light rail trip datasets.

PARTICIPATION
Open to students in Planning, Data Science (SDS), Architecture, Software and Information Systems (SIS), and Computer Science (CS).
Faculty from across the campus (and a few from across North America) have been invited to present a series of nine online mini-lectures over the course of the semester. **All of the lectures will be at 11:15 on Tuesdays.**

These researchers are focused on a broad range of topics including architecture, visual analytics, design science, material computation, urbanism, human-computer interaction, creativity, connectivity, and computer vision.

Everyone is invited to join the lectures on Google Meet at: [meet.google.com/tyd-beui-otc](http://meet.google.com/tyd-beui-otc)

You can link to the google calendar [here](#).

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**In Case You Missed It: Wednesday Seminar, Navigating Resumes and Interviews During a Pandemic**

Did you miss this Wednesday Seminar?

Head to the [SDS Youtube channel](#) to check out the recording, or watch it again if you enjoyed the session!

Don't forget to like and subscribe!

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**Watch It Again: SDS Fall Webinar Series - Data Analytics In The Intelligence Community**
Did you miss our final Fall Webinar?

Head to the [SDS Youtube channel](#) to check out the recording, or watch it again if you enjoyed the session!

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**Reminder: Complete Your Research Climate Survey**

Research has shown perceptions of ethical research climate can impact research behavior. Because UNC Charlotte is committed to continuous improvement of our research climate, we are seeking to **gather your perceptions about the research climate** of our institution.

A few weeks ago, you received an emailed invitation from the National Center for Professional and Research Ethics (NCPRE) to an online survey about our research climate. If you consent to participate, you will see screening questions to determine if you are eligible to complete the full survey.

**Your survey responses will be anonymous** (research study IRB #19-0818). Those who complete it will have the opportunity to provide contact information on a separate form to be eligible to receive an Amazon gift card.

**Graduate Students and Postdocs**: The first 200 students to complete the survey will receive a **$5 Amazon gift card**, plus everyone will be entered into a random drawing to win one of five (5) **$50 Amazon gift cards**. You will not know in advance if you are eligible to receive a gift card.

We encourage each of you to complete this survey to help us identify any areas in which additional attention to our systems, policies, and processes may be beneficial.
SDS Executive Director Appointed To UNC Charlotte Strategic Planning Committee

SDS Executive Director, Doug Hague, was appointed to the 2021 Strategic Planning Committee, on behalf of Chancellor Gaber.

Learn how this diverse committee of faculty, staff, students and administrators will set the direction of the future of UNC Charlotte for years to come.

Read More Here
SDS Fall Webinar Series: Resume Critique and Interview Coaching with Lending Tree

LendingTree is a Charlotte-based company. It is the nation's leading online marketplace that connects consumers with the choices they need to be confident in their financial decisions. LendingTree empowers consumers to shop for financial services the same way they would shop for airline tickets or hotel stays, comparing multiple offers from a nationwide network of over 500 partners in one simple search, and can choose the option that best fits their financial needs. Services include mortgage loans, mortgage refinances, auto loans, personal loans, business loans, student refinances, credit cards, and more.

When: December 2, 2020 - 4:00 p.m. to 5:00 p.m.

Register Here

Charlotte Area Analytics Group: Ethical Usage of Data
When: December 3, 2020 - 12:00 PM to 1:00 PM

Data Ethics is now a conversation being held across all industries as our efforts towards transformation have outpaced our risk management in some instances - the conversation has moved from what can we do with data to what should we do with data.

Register Here

SDS Wednesday Seminar: Career Opportunities with Genpact

When: December 9, 2020 - 4:00 PM to 5:00 PM

Join us to learn more about how Genpact is using Data Science and AI to serve their clients, and career opportunities for students.
Genpact is a global professional services firm that makes business transformation real. It drives digital-led innovation and digitally-enabled intelligent operations for clients, guided by experience running thousands of processes primarily for Global Fortune 500 companies.

Register Here

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Featured Job Opportunities

Data Scientist, SAS

SAS is hiring a data scientist as part of the product management group working with its Research & Development sector.

Click the link below to discover the required qualifications, summary of duties and how to apply.

Apply Here

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Programmer/Data Analyst Internship, 85 Software

85 Software

Reducing Waste One Order At A Time.
The goal of 85 Software is to change how restaurant's fundamentally do business and in return reduce waste through the entire food supply chain. This internship will pay $17.50 an hour (bi-weekly as an independent contractor) with a minimum of 160 hours during the spring semester in 2021. This internship has the potential to lead to a full-time position or even a co-founder role if we find the correct candidate!

Job Overview:
Build infrastructure for restaurant forecasting software startup. Use inputs from supplier and buyer side to predict orders at an individual restaurant level. Predictive model will leverage cloud computing and results will displayed on a dashboard. Intern will be responsible for improving on infrastructure in place and improving predictive analysis.

Key Skills Needed:
- Experience with Cloud Computing
- Amazon Web Services a plus
- Experience with Python
- Entrepreneurial mindset
- Experience with Docker and ARIMA a plus
- Experience with Open Source Databases (RDS a plus)

Apply Here

People Analytics Intern, Trane Technologies

Trane Technologies is looking for a People Analytics intern that has a passion with using data to drive insights, tell compelling stories, and deliver transformative results that directly impact 40,000 associates.

The ideal candidate would have a deep interest in people topics and a desire to ensure Trane Technologies is a place where every associate feels like they belong. This individual will partner closely with HR Business Partners and the Talent and Organizational Capabilities team to disrupt how our associates feel about key experiences at the company. The candidate needs the ability to work 15-20 hours per week.

Click the link below to discover the required qualifications, summary of duties and how to apply.

Apply Here
Summer 2021 Internship Opportunities: Hire-A-Niner

Data Analytics Engineer Internship - Allstate
Data Science Internship - Allstate
Data Delivery Product Manager Internship - Allstate
Data Visualization Internship - Lenovo

SDS Hire-A-Niner page

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