# Sydney Louit

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LinkedIn
Personal email

## *Education*

**University of Connecticut** August 2022 – Present
*Ph.D., Statistics (In progress, expected completion in 2025)* *Storrs, CT*

- Passed General Exam in November 2024
- Coursework includes Inference and Probability, research areas include network analysis and spatial statistics.
- Vice-President of Graduate Student Committee in Statistics (2023-2024 year)

**University of Connecticut** August 2020 – December 2021
*M.S., Biostatistics* *Storrs, CT*

- Coursework included Linear Models, Mathematical Statistics, Biostatistics, Data Management in SAS and R, Design of Experiments, Survival Analysis, Epidemiology, Statistical Consulting

**Cornell University** August 2017 – May 2020
*B.S., Biometry & Statistics* *Ithaca, NY*

- Graduated one year early
- Minors: Applied Economics, Astronomy
- VP and Historian of Cornell Astronomical Society

## *Publications*

- Zachary Donnini, **Sydney Louit**, Shelby Wilcox, Mukul Ram, Patrick McCaul, Arianwyn Frank, Matt Rigby, Max Gowins, Scott Tranter (2024). "Election Night Forecasting With DDHQ: A Real-Time Predictive Framework" *Harvard Data Science Review* 6 (4). https://doi.org/10.1162/99608f92.ccb395f0

- **Sydney Louit**, Jun Yan, Panpan Zhang, Evan Clark, Niketna Vivek, Alexander Gelbard (2024+). "CALF-SBM: A Covariate-Assisted Latent Factor Stochastic Block Model" *Submitted*

- **Sydney Louit**, Mukul Ram, Kiel Williams, Alex Alduncin, Patrick McCaul, Scott Tranter (2022). "Psephological Correlated Simulation Techniques With Decision Desk HQ: For the 2022 Midterms and Beyond" *Harvard Data Science Review* 4 (4). https://doi.org/10.1162/99608f92.e5a9a4b0

## *Teaching Experience*

**Statistical Methods (STAT 3025)** Fall 2024 and Spring 2025
*Primary Instructor and Teaching Assistant*

- Taught a sophomore-level undergraduate course on mathematical statistics

**Elementary Concepts of Statistics (STAT 1100)** Fall 2023 and Spring 2024
*Primary Instructor and Teaching Assistant*

- Taught a large lecture (200+ students) on introductory statistics

**Mathematical Statistics I (STAT 3375)** Fall 2023
*Primary Instructor and Teaching Assistant*

- Taught an intermediate undergraduate course on mathematical statistics

*Work Experience*

**Data Science Leadership Development Program Intern** Summer 2023 and 2024

*Travelers* *Hartford, CT*

- Under guidance from manager, created machine learning model and experimented with deep learning
- Learned and applied SAS skills to refresh an existing model with feature engineering
- Took advanced courses to improve proficiency in Python, SQL, Excel, and Git
- Part of a team that won program-wide coding competition in 2024
- Received an official job offer beginning in Fall 2025

**Data Scientist** June 2021 – February 2023

*Decision Desk HQ* *Alexandria, VA*

- Assisted in creating live models
- Made race calls on election nights
- Developed election forecasting methodologies
- With colleagues, wrote and published paper on correlated simulations
- Worked during 2024 election night, and was part of the team that correctly projected most races before all other networks

**RMCL Lab Intern** Summer 2017 and 2018

*PerkinElmer* *Shelton, CT*

- Validated data of the certified UV spectrometer
- Analyzed collected data
- Logged and shipped completed UV standards

*Awards & Honors*

**JSM Student Paper Award**

*ASA - American Statistical Association* *February 2025*

"CALF-SBM: A Covariate-Assisted Latent Factor Stochastic Block Model"

**Student Paper Award - Honorable Mention**

*ICSA - International Chinese Statistical Association* *May 2024*

"CALF-SBM: A Covariate-Assisted Latent Factor Stochastic Block Model"

**First Prize - Poster Competition**

*NESS NextGen Data Science Day* *November 2021*

"Predicting Future Light Pollution Using VIIRS Satellite Data and OECD GDP Projections to 2060"

**Speed Poster Award Winner**

*UConn Statistics in Pharmaceuticals Conference* *August 2021*

*External Projects*

**Chessbot** July 2024 – Present

- Coding project in C++ to design a chess-playing bot. Currently plays at approximately a 1400 Elo rating.

**Light Pollution Economic Analysis** October 2021 – June 2022

- Used 90GB of satellite data to analyze economic growth in countries from 2013-2021. Currently working on an adjustment for oil-dependent economies, which appear much brighter than their economy would suggest.

**FIFA World Cup Model** July 2021 – December 2022

- Created a Bayesian Poisson GLM to estimate team quality, then developed an efficient simulator for the structure of the World Cup qualifiers.

**2020 Election Live Model** November 2020

- Wrote a Python program to pull live election results from online, paste in spreadsheet, and used the spreadsheet to calculate live probabilities for each state. Projected state and national outcomes in real-time

*Specialized Skills*

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**Spoken Languages:** English (Native), French, Thai, Mandarin Chinese (mild conversational)
**Programming (in order of proficiency)**: Python, R, SAS, SQL, C++
**Software**: Excel, LaTeX, Minitab
**Machine Learning**: Gradient Boosting, Random Forest, Ensembling
**Deep Learning**: Neural Networks, CNNs