
Sydney K. Purdue

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2960 N Ridgeway Ave. Floor 1
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EDUCATION

The University of Chicago, Chicago, IL

Bachelor of Sciences in Statistics; minor in Visual Arts; 2018

Selected Coursework: Data and Algorithm in Art; Data Visualization (audit); Introduction to Spatial Data Science; History of Cartography; Multiple Testing, Modern Inference, and Replicability; Applied Regression Analysis; On Art and Life; Scenic Design; The Plan: Diagramming Modernity; The Material Science of Art

EXPERIENCE

Cook County Sheriff's Office, Research Department, Chicago, IL,

Senior Research Analyst, September 2021 – Present;

- Created overarching visual design schema and over 40 unique figures for all 16 sections of an annual report
- Implemented ML models like XGBoost and random forest to guide internal program decisions
- Cleaned, transformed, summarized, and clearly presented data using Stata and R for recurring and one-time reports and data requests
- Advised in departmental transition from Stata to R to enable more complex and replicable analyses
- Automated frequent or repetitive data requests and reports for replicability and ease-of-use, integrating RMarkdown and SQL to fully automate reports on-demand
- Reviewed other analysts' code and reports for clarity and accuracy; provided advice and assistance to others encountering difficult coding problems

Previously: Research Analyst, January 2020 – September 2021; and

International Innovation Corps/Cook County Sheriff's Office Research Department, Chicago, IL

Applied Data and Governance Fellow, December 2018 – January 2020

Freelance work under Hallie Palladino, Chicago, IL

Statistician and Data Visualization Specialist, March 2018 – Sept. 2018

- Compiled, organized, and visualized data about gender, race, and parenthood disparities in professional theater companies using R for presentation at a conference
- Consulted on data collection and usage methodology with the other researchers

Take the Stage, Chicago, IL

Production Designer, May 2018 – July 2018

- Designed, budgeted, and oversaw execution of all aspects of the design for a children's production

University Theater/TAPS, University of Chicago, Chicago, IL

Assistant to the Scenic Designer, May 2016 – June 2018

- Constructed, installed, and took down scenic elements for 4 productions every 10 weeks
- Advised designers and served as a knowledgeable intermediary between students and professional staff

The Center for Robust Decision-Making on Climate and Energy Policy, Computation Institute, University of Chicago, Chicago, IL,

Undergraduate Researcher, June 2015 – June 2017

- Aggregated, analyzed, and visually represented agricultural data from a spatially distributed 100-year time series, and refined predictive linear models in R
- Built an interactive visualizer in Shiny that graphs, creates trend lines, and more; documented visualizer project extensively as template for others' future projects

SELECTED ACTIVITIES, MEMBERSHIPS & AWARDS

Co-Organizer, *R-Ladies Chicago*, Apr. 2020 – Present; **Member** since Sept. 2018

Member, *Chicago Data Viz Community*, Dec. 2018 – Present

Discussion Group Leader, *SatRday Chicago*, May 30, 2020

Co-Organizer, *Chicago R Collab*, Mar. 14-15, 2020; **Attendee**, Mar. 9-10, 2019

Attendee, *VisFest Unconf*, Aug. 26-27, 2019

Member, *University Theater, University of Chicago*, Sept. 2014 – June 2018

- **21** credits in various positions including **Scenic Designer** and **Stage Manager**
 - Designed, drafted, constructed, fabricated, and painted sets for 13 productions
 - Oversaw rehearsals and scheduling and ensured safety and efficiency
 - Mentored and trained 14 assistants as scenic designers
 - Collaborated and coordinated with designers, management, and directors

2018 TAPS College Honors Award – Exemplary Mentor Award

- Awarded to graduating students nominated by their peers for outstanding mentorship contributions to the university theater community

Dean's List 2015, 2017

SKILLS

Programming

- 7 years experience with R through RStudio with extensive use of:
 - tidyverse packages
 - ggplot2, ggplot extensions, and data visualization techniques
 - Shiny
 - RMarkdown, advanced techniques
 - Modeling, statistical analysis, and spatial data analysis
- 2 years experience with Python especially using pandas, scipy, and matplotlib
- 3 years experience with Stata
- 1.5 years with SQL, integrated through both R and Python
- Proficient with version control, git, GitHub, and svn
- Familiarity with JavaScript (D3.js), bash, HTML/CSS, LaTeX, OpenSCAD

Software

- Proficient with Adobe Creative Suite and Microsoft Office
- Familiarity with ArcGIS Pro and Tableau
- Experience with 3D modeling programs like AutoCAD and Sketchup
- Experience with FFmpeg, Mathematica, Tcl

SELECTED PROJECTS

Illinois Yield Trials, June 2015 – June 2017

- Custom dashboard-style data visualization of historical agricultural data
- https://skpurdue.shinyapps.io/illinois_yield_trials/

Data Structures Visualized, June 2017

- 3D printed models of data structures built algorithmically in OpenSCAD
- Randomized models of a line, tree, and matrix

Floss Colors, May 2020

- Experiment visualizing current owned and available DMC embroidery floss colors