

Sydney K. Purdue

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EDUCATION

PhD in Interdisciplinary Design & Media

Anticipated April 2027

Northeastern University, *College of Arts, Media, & Design*, Boston, MA

Bachelor of Sciences in Statistics; minor in Visual Arts

June 2018

The University of Chicago, Chicago, IL

WORK EXPERIENCE

Doctoral Researcher

September 2022 – Present

Northeastern University, *College of Arts, Media, & Design*

Boston, MA

- Developed and completed research projects from inception to publication and next steps
- Conducted quantitative perceptual studies, conducted qualitative surveys as well as remote and site-visit interviews, ran workshops, and created research-through-design projects
- Documented process, analyzed data, summarized findings, and visualized information
- Wrote academic research papers and popular articles to disseminate research
- Presented research outcomes at top-tier conferences

Lab Instructor

January 2026 – April 2026

Northeastern University, *College of Arts, Media, & Design*

Boston, MA

- Facilitated lab sections independently, developed in-class walkthroughs and activities in p5.js, and administered online materials and resources

Teaching Assistant

September 2024 – April 2026

Northeastern University, *College of Arts, Media, & Design*

Boston, MA

- Collaborated with faculty in grading assignments, supported students through office hours and working sessions, and taught class sessions as needed
- Advised master's students on thesis research project design including on literature reviews, IRB submission, and project execution

Senior Research Analyst

September 2021 – June 2022

Cook County, *Research Department*

Chicago, IL

- Created overarching visual design schema and over 40 unique figures for all 16 sections of an annual report
- 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 coding problems

Previously, **Research Analyst**, and

January 2020 – September 2021;

Applied Data and Governance Fellow

December 2018 – January 2020

Statistician and Data Visualization Specialist

March 2018 – September 2018

Freelance work under Hallie Palladino

Chicago, IL

- 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

Undergraduate Researcher

June 2015 – June 2017

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

Chicago, IL

- Aggregated, analyzed, and visually represented agricultural data from a spatially distributed 100-year time series, and refined predictive linear models in R

ARTISTIC WORK EXPERIENCE**Scenic Designer**

May 2025 – November 2025

Northeastern University, *Department of Theatre*

Boston, MA

- Designed the set of a theatrical production based on data, integrating data visualization and theater design principles in collaboration with the director, management, other designers, and technical staff
- Integrated input visualizations into pre-show and post-show activities and worked with a undergraduate research assistant to execute the designs

Production Designer

May 2018 – July 2018

Take the Stage

Chicago, IL

- Designed, budgeted, and oversaw execution of all physical aspects of the design for a children's production, including costumes, props, and sets
- Instructed and coordinated middle and high school students in completion of design elements daily over six weeks

Assistant to the Scenic Designer

May 2016 – June 2018

University of Chicago, *University Theater, Tech Staff*

Chicago, IL

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

TEACHING EXPERIENCE**LAB INSTRUCTOR**Prototyping with Code, *Northeastern University*

Spring 2026

TEACHING ASSISTANTPrototyping with Code, *Northeastern University*

Spring 2026

Information Design Studio 2, *Northeastern University*

Fall 2025

Information Design Studio, *Northeastern University*

Summer 2025

Prototyping with Code, *Northeastern University*

Spring 2025

Prototyping with Code, *Northeastern University*

Fall 2024

PUBLICATIONS

PAPERS

Sydney K Purdue, Enrico Bertini, Melanie Tory. (2026). The Now and Then: Integrating Current and Historical Data in Small Multiple Time Series Visualization. *Conditionally Accepted to IEEE Transactions on Visualization and Computer Graphics*

Sydney K Purdue, Eduardo Puerta, Enrico Bertini, Melanie Tory. (2025). Stitching Meaning: Practices of Data Textile Creators. *IEEE Transactions on Visualization and Computer Graphics*, Presented at VIS '25, <https://doi.org/10.1109/TVCG.2025.3634255>

EXTENDED ABSTRACTS

Sydney K Purdue, Eduardo Puerta. (2026). How to Stitch Together a Paper in 14,306 Minutes. Extended Abstract in the Proceedings of the Twentieth International Conference on Tangible, Embedded, and Embodied Interaction (TEI '26). <https://doi.org/10.1145/3731459.3779149>

Maryam Rezaie, **Sydney K Purdue**, Anjali Khurana, Parmit K Chilana, Melanie Tory, Sheelagh Carpendale. (2024). Summary of the Workshop on Interactions for Supporting Explanations and Promoting Comprehension. In Companion Proceedings of the Conference on Interactive Surfaces and Spaces 2024 (ISS Companion '24) <https://doi.org/10.1145/3696762.3698046>

WORKSHOP PAPERS

Narges Mahyar, Foroozan Danehszand, Negar Ghorashi, **Sydney K Purdue**, Matthew Brehmer. Community Craft and Embodied Input Physicalization at the Playground. (2026). Proceedings of the Workshop on Craft-Based Data Physicalization: Opportunities and Challenges at ACM CHI 2026. <https://doi.org/10.17605/OSF.IO/A5U63>

Rahul Bhargava, **Sydney K Purdue**, Laura J Perovich, Dani Snyder-Young, Alayt Issak, Michael Arnold Mages, Moira Zellner, Dean Massey, Geneliz Herrera. (2025). Data Theatre as Input Visualization: Building Community Voice and Cohesion. Proceedings of the Workshop on Envisioning a Research Agenda for Input Visualization at IEEE VIS 2025. <https://doi.org/10.17605/OSF.IO/XPQCF>

ORGANIZED WORKSHOPS

Sydney K Purdue, Eduardo Puerta. (2025). Stitching Meaning: Collaborative Data Quilting. At Information+, November 14-16, 2025, Boston, MA

Maryam Rezaie, **Sydney K Purdue**, Anjali Khurana, Parmit K Chilana, Melanie Tory, Sheelagh Carpendale. (2024). Interactions for Supporting Explanations and Promoting Comprehension. At the Conference on Interactive Surfaces and Spaces (ISS Companion '24), October 27–30, 2024, Vancouver, BC, Canada.

EXHIBITIONS

How to Stitch Together a Paper in 14,306 Minutes and Illuminating Forestation within Sense: The Act of Engaging <i>CAMD Day, Boston, MA</i>	March 2026
How to Stitch Together a Paper in 14,306 Minutes within Arts & Performance <i>ACM Tangible, Embedded, and Embodied Interaction (TEI) 2026, Chicago, IL</i>	March 2026
Illuminating Forestation within Pretend: The Performance of Becoming	December 2025

CAMD PhD Students, Boston, MA

Illuminating Forestation within Form | Bend | Press

April 2024 – October 2024

MLA (Moskow Linn Architects), Cambridge, MA

Quilted Memory within Warm & Cozy, Art that Comforts

October 2023 – January 2024

Annmarié Sculpture Garden & Arts Center, Solomons, MD

What's the Difference, or A Sense of Scale within Making Sense

December 2023

Boston Cyberarts Gallery, Boston, MA

SPEAKING

PAPER TALKS

Stitching Meaning: Practices of Data Textile Creators, *IEEE VIS*

November 2025

Data Theatre as Input Visualization: Building Community Voice and Cohesion, *IEEE VIS, Workshop on Envisioning a Research Agenda for Input Visualization*

November 2025

GUEST LECTURES

Prototyping with Code, *Northeastern University*

Spring 2026

- Covering basic data visualization theory and examples with p5.js

Prototyping with Code, *Northeastern University*

Spring 2025

- Covering images, sound, and text in Processing

Advanced Data Visualization Seminar, *Northeastern University*

Fall 2024

- Covering data physicalization

Research Methods in Interdisciplinary Design & Media, *Northeastern University*

Fall 2023

- Covering basic statistics, including context and pitfalls

AWARDS

Harris School of Public Policy Applied Data and Governance Fellowship

2018, extended in 2019

- Awarded a stipended fellowship with placement to Chicago government agencies or non-profits working on civic data problems within the organization

TAPS College Honors Award – Exemplary Mentor Award

2018

- Awarded to graduating students nominated by their peers for outstanding mentorship contributions to the University Theater community

MENTORSHIP

MASTERS STUDENTS

Yichen 'Cliff' Yang, *Northeastern University, Computer Science*

January 2025 – April 2026

SELECTED PROJECTS

How to Stitch Together a Paper in 14,306 Minutes,
with Eduardo Puerta

May – September 2025

- Pillows representing the worktime spent on our paper, ‘Stitching Meaning: Practices of Data Textile Creators’ through three different textile mediums: quilting, knitting, and crochet/knitting

Illuminating Forestation

February – April 2024

- Maple veneer molded lamp combining historical trends of global deforestation and afforestation made more visible through internal lighting

What’s the Difference, or A Sense of Scale

November – December 2023

- Interactive display stations examining and explaining how human senses perceive difference across a variety of scales, such as different tactile inputs and different smells; component of an exhibit installation on the theme of senses

Quilted Memory

April – May 2023

- Custom quilted jacket combining elements of smart textiles and data physicalization in memory of a loved one

3D Data Structures

November – December 2023, August 2018, June 2017

- 3D printed models of data structures built algorithmically in OpenSCAD
- Added randomized models of a line, tree, and matrix
- Updated with additional models and built teaching tool into IPython notebooks in 2023

Floss Colors

May 2020

- Experiment visualizing current owned and available DMC embroidery floss colors

Illinois Yield Trials

June 2015 – June 2017

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

SELECTED THEATRICAL EXPERIENCE

SCENIC DESIGNER

The Numbers, Northeastern University Theater Department

November 2025

I and You, University Theater

May 2018

Eurydice, University Theater

March 2018

She Kills Monsters, University Theater

June 2017

Mr. Burns, a post-electric play, University Theater

March 2017

Iphigenia and Other Daughters, University Theater

November 2016

By the Bog of Cats, University Theater

March 2016

Giselle, UBallet

February 2016

Twelfth Night, University Theater

November 2015

PROPS DESIGNER

Iphigenia and Other Daughters, University Theater

November 2016

SCENIC ARTIST

<i>Don't Smoke In Bed</i> , Chimera Ensemble	June 2018
<i>Animals Out of Paper</i> , University Theater	June 2018
<i>Night of January 16th</i> , University Theater Collaboration	May 2017
<i>West Side Story</i> , University Theater	June 2016
<i>Noises Off</i> , University Theater	May 2016

ORIGAMIST

<i>Animals Out of Paper</i> , University Theater	June 2018
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ACTIVITIES AND MEMBERSHIPS

Attendee , <i>a2ru Emerging Creatives 2026 Student Summit</i>	March 5-8, 2026
PhD Affiliate , <i>Northeastern Center for the Arts</i>	Spring 2026 – Present
Data Craft Circle Organizer , <i>Data Visualization Society</i>	January 2026 – Present
Retreat Coordinator , <i>Northeastern Khoury Vis Lab</i>	September 2025 – September 2026
PhD Affiliate , <i>Northeastern Data Theatre Collaborative</i>	Summer 2025 – Present
Bargaining Committee Member , <i>GENU-UAW</i>	November 2023 – Present
Social Coordinator , <i>Northeastern Khoury Vis Lab</i>	September 2023 – September 2025
Organizing Committee Member , <i>GENU-UAW</i>	September 2022 – Present
Member , <i>Northeastern Khoury PhD Women's Group</i>	September 2022 – Present
Co-Organizer , <i>Chicago Data Viz Community</i> ; Previously, Member	August 2019 – June 2022; December 2018 – June 2022
Co-Organizer , <i>R-Ladies Chicago</i> ; Previously, Member	April 2020 – June 2022; September 2018 – June 2022
Co-Organizer , <i>Chicago R Collab</i> ; Previously, Attendee	March 14-15, 2020; March 9-10, 2019
Attendee , <i>VisFest Unconf</i>	August 26-27, 2019
Member , <i>University Theater, University of Chicago</i>	September 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	

SKILLS

PROGRAMMING

- 11 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](#)

- 4 years experience with Python with extensive use of:
 - pandas, scipy, matplotlib, altair
 - IPython notebooks
- 4 years experience with Stata
- 2 years experience with SQL, integrated through both R and Python
- 1.5 years experience with JavaScript (D3.js, p5.js) and integration through Svelte
- 1 year experience with Processing
- 0.5 years experience with OpenSCAD, through OpenSCAD development environment and through integration with Python and IPython
- Proficient with version control, git, GitHub, and svn

SOFTWARE

- Proficient with Adobe Creative Suite and Microsoft Office
 - Extensive use of Illustrator and InDesign
- Familiarity with ArcGIS Pro and Tableau
- Familiarity with 3D modeling programs like AutoCAD, Fusion360, Rhino, Sketchup
- Experience with FFmpeg, Mathematica, Tcl

FABRICATION & ARTISTIC MEDIA

- 2.5 years experience with 3D printing
- 2 years experience with laser cutting
- 1.5 years experience with Arduino, physical computing
 - Including use of Lilypads and smart textile integration
- Proficient with sewing machines, sergers, hand-sewing, hand-embroidery techniques, embroidery machines, cross-stitch techniques, quilting techniques, machine quilting, clothing construction techniques, hand-knitting, machine knitting
- Proficient with table saw, band saw, planer, jointer, miter saw, belt sander, jigsaw, sawzall, drill press, wood construction techniques
- Proficient with acrylic painting, large-scale painting, sculpture (modeling and assembled media), origami techniques, scale modeling techniques, printmaking (block and intaglio), hand building and wheel throwing ceramic techniques