

EDUCATION

- Sep 2023 – Present **Master of City Planning**
Department of Urban Studies and Planning, Massachusetts Institute of Technology, USA
- 2-year professional graduate program with graduate academic fellowship
 - Currently a research assistant with the Data+Feminism Lab
- Aug 2012 – Jul 2016 **Environmental Engineering, Bachelor of Engineering (BEng)**
Nanyang Technological University (NTU), Singapore
- Awarded full 4-year scholarship by the Singaporean Ministry of Foreign Affairs
 - Graduated with Second Upper Class Honors

RELEVANT EXPERIENCE

- Apr 2020 – Sep 2023 **Kontinentalist Pte Ltd**
Data Visualization Designer
- Contributed project management, research and code development to data stories and storytelling partnerships on topics such as the relationship between gender and urban design, climate change, social development, and culture, with a focus on Asia
- Oct 2018 – Aug 2023 **Research Assistant, Meta Design Lab**
Singapore University of Technology & Design (SUTD), Singapore
- Sep 2022 – Aug 2023
- Text Analytics and Reply Generation for Urban Planning, Phase 2
Funded by the Design and Planning Lab (DPL), Singapore Urban Redevelopment Authority (URA)
- Develop an empathetic Smart Reply Assistant using NLP techniques to support urban planners in responding to unstructured public feedback text
- Nov 2021 – Aug 2023
- Future of the Office**
Collaboration with Lee Kuan Yew Center for Innovative Cities (LKYCIC)
- Analyze mobility patterns pre-, during and post-COVID using public transportation data (buses and trains), network science, and spatial statistics to map new patterns of mobility and urban centrality
- May 2021 – Aug 2023
- Forecasting future aviation demand for cities, Aviation: Horizon 2050**
Collaboration with Aviation Studies Institute (ASI), Singapore University of Technology and Design (SUTD)

Oct 2019 –
Mar 2020

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Aug 2020 –
May 2021

Oct 2018 –
Apr 2020

- Design data visualizations to show key trends as part of an atlas of aviation for architects, designers, and planners. Forecast trends in 2050 aviation networks and understand potential infrastructural demands on airports using network science, economic indices, and specifications of sustainable aircraft types

Feedback Analytics and Data Visualization for Ground Sensing of Topics Through Time, Phase I

Collaboration with the Design and Planning Lab (DPL), Urban Redevelopment Authority (URA), Singapore

- Developed workflow and dashboard features for in-house planning tool to visualize and derive spatiotemporal insights and topic evolution from unstructured text of citizen feedback using topic modelling and natural language processing

Improving Design Decision-Making through Data Visualization

SUTD-MIT International Design Centre

- Investigated the role of data visualization in decision making for architecture and design fields through lab experiments and surveys to develop user guidelines. Contributed code to Vue- and [Svelte-based](#) charting and mapping libraries for flexible, componentized data visualization based on the Grammar of Graphics, a framework for describing and creating statistical graphics

AWARDS

2023

[Silver](#). *A Woman's World: Creating spaces for joy, leisure, and resistance in South and Southeast Asia*, WAN-IFRA Digital Media Awards - Asia 2023.

[Shortlisted](#). *A Woman's World: Creating spaces for joy, leisure, and resistance in South and Southeast Asia*, Information is Beautiful Awards 2023.

TEACHING

Feb – Apr
2019, 2020

Teaching assistant, Interactive Data Visualization
Singapore University of Technology and Design

TALKS, WORKSHOPS & POSTERS

Oct 2023

Cities of Stories: Storytelling beyond maps

Guest lecture for Syracuse University's Cities of Stories course that introduced undergraduate students to methods to work with spatial data using storytelling techniques and online tools

Mar 2023

Industry Perspectives in Interactive Data Visualization

Talk co-hosted by SUTD's Master of Urban Science and Public Policy (MUSPP) and Data Viz Singapore to expose students to perspectives from regional data visualization practitioners

- Feb 2023 **Kontinentalist Data Storytelling Workshop**
1-day workshop to teach professional from community development, research, journalism, digital marketing beginner-level data storytelling and persuasion techniques, basics of data visualization and information design
- Aug 2022 **The New World Order: Forecasting Future Aviation Demand**
World Cities Summit 2022, Science of Cities Symposium
Accepted as poster and panel presentation at the inaugural edition of the symposium
- Nov 2021 **Beyond the Statistics: Finding the ‘Real Story’ Behind Gender Data**
Asian Development Bank
2021 ADB Asia and the Pacific Virtual Gender Forum | The Power to Transform: Gender Equality in Asia and the Pacific
- Spatial data for communication and investigation**
Brown Institute, Columbia University
The Wrangler Training Series

PUBLICATIONS

- **B Dy**, I Nazim, S Koh, A Chua, “Topics Through Time: Clustering and Visualizing Unstructured Public Feedback for City Planning”, forthcoming
- **B Dy**, A Meeran, A Agarwal, SC Joyce, “A new world of airports: forecasting 2050 aviation networks towards sustainable adaptation” in 26th Air Transport Research Society World Conference, Kobe, Japan, 2023
- **B Dy**, I Nazim, A Poorthuis, SC Joyce, “Improving Visualization Design for Effective Multi-Objective Decision Making” in IEEE Transactions on Visualization and Computer Graphics, 2021
- A Poorthuis, L van der Zee, G Guo, JH Keong, **B Dy**, “Florence: a Web-based Grammar of Graphics for Making Maps and Learning Cartography” in Cartographic Perspectives, 2020
- G Guo, **B Dy**, N Ibrahim, SC Joyce, A Poorthuis, “Examining Design-Centric Test Participants in Graphical Perception Experiments” in EuroVis (Short Papers), 2020
- SC Joyce, G Guo, **B Dy**, N Ibrahim, A Poorthuis, “Seeing Numbers: Considering the Effect of Presentation of Engineering Data in Design” in IASS Annual Symposium 2019 – Structural Membranes 2019 Form and Force. Barcelona, Spain, 2019
- **B Dy** and R Stouffs, “Combining Geometries and Descriptions A shape grammar plug-in for Grasshopper” in eCAADe - Computing for a Better Tomorrow. Lodz University of Technology, Lodz, Poland, 2018, Volume: 2, pp. 499-598

SELECTED SKILLS

- **Programming languages:** JavaScript, HTML, CSS (4+ years), Python (6+ years)
- **Web development:** Vue, Svelte (4+years)
- **Languages:** Native fluency in Filipino, English; Conversational German (Goethe-Zertifikat C2), Intermediate French (B1)

REFEREES

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