

Bianchi Dy

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Seeking a role in **transportation planning, urban planning, data visualization**, where I can apply my skills in **statistics, demand modeling, participatory methods, data visualization, negotiation and urban design**. Interested in **transit-oriented development, mobility experiences and design for public leisure spaces**, with a focus on practical problem-solving and collaboration both in and out of the office.

EDUCATION

Sep 2023 – Present **Master of City Planning Candidate, 2025**
Department of Urban Studies and Planning, Massachusetts Institute of Technology, USA

- Research assistant, Data+Feminism Lab, leading graphic design, web development and data visualization on the [Feminist Smart Cities project](#) and the Liberatory AI Ecosystem project
- Received departmental fellowship towards tuition and took classes on urban design, spatial statistics and discrete choice modelling
- Led research collaboration on night-time mobility to access leisure with Morgan State University faculty
- **Thesis:** When Girls Just Want to Have Fun, How Do They Go? A Mixed Methods Study on Night-time Transit Demand and Provision in Boston

Aug 2012 – Jul 2016 **Environmental Engineering, Bachelor of Engineering (BEng)**
Nanyang Technological University (NTU), Singapore

- Awarded full 4-year scholarship by Singapore's Ministry of Foreign Affairs
- Graduated with 2nd Upper Class Honors and the Dorothy Cheung Gold Medal

WORK EXPERIENCE

Sep 2023 – May 2025 **Research Assistant, Data + Feminism Lab**
Massachusetts Institute of Technology, USA

- Led design, web development and storytelling on projects about feminist smart cities and liberatory AI ecosystems

Oct 2018 – Aug 2023 **Senior Researcher, Meta Design Lab**
Singapore University of Technology & Design (SUTD)

Sep 2022 – Aug 2023 **Text Analytics and Reply Generation for Urban Planning, Phase 2**
With Design and Planning Lab, Singapore Urban Redevelopment Authority

- Developed an empathetic Smart Reply Assistant using open-source LLMs to reply to unstructured public feedback

Nov 2021 – Aug 2023 **Future of the Office**

- May 2021 – Aug 2023

With Lee Kuan Yew Center for Innovative Cities (LKYCIC)

 - Analyzed mobility patterns using public transit data, network science, and spatial statistics to map emergent patterns of mobility post-COVID
- Oct 2019 – Mar 2020

Forecasting future aviation demand for cities, Aviation: Horizon 2050
With Aviation Studies Institute (SUTD) and Netherlands Aviation Consultants (NACO)

 - Forecasted potential infrastructural demands on airports using network science, city-level economic data, and advancements in high-speed rail, eVTOL and hydrogen-powered aircraft
- Oct 2019 – Mar 2020
&
Aug 2020 – May 2021

Feedback Analytics and Data Visualization for Ground Sensing of Topics Through Time, Phase I
With the Design and Planning Lab (DPL), Urban Redevelopment Authority (URA), Singapore

 - Developed workflow and dashboard features to visualize and derive spatiotemporal topic evolution from unstructured text of citizen feedback using topic modeling, machine learning, and dimensionality reduction techniques (tSNE, UMAP) and new visualization forms (temporal topic trees)
- Oct 2018 – Apr 2020

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. Developed Vue- and [Svelte-based](#) charting and mapping libraries for flexible, modular data visualization components based on the Grammar of Graphics
- Apr 2020 – Aug 2023

Kontinentalist Pte Ltd
Data Visualization Designer

 - Managed small to medium-sized multicultural teams in research, writing and code development of data stories and storytelling partnerships on Asian-centric topics such as climate change, foreign investment, pop culture, gender issues and urban planning
- Nov 2016 - Jul 2018

Department of Architecture, National University of Singapore
Research Assistant / A shape grammar interpreter for Grasshopper and Rhino

 - Developed the API and Grasshopper plugin for the [Sortal Shape Grammar Interpreter \(SortalSGI\)](#), a Python-based framework for creating and implementing shape grammars in Grasshopper and Rhino. Generated shape grammar simulations as part of a visiting PhD student's research on design grammars for train stations

TALKS, WORKSHOPS & POSTERS

- Jan 2025

When Girls Just Want to Have Fun, How Do They Go?
Poster presentation of research collaboration with G Newmark (Morgan State University) at 105th Transportation Research Board Annual Meeting, Washington D.C.

- Feb 2024 **Pizza and Press: From urban planning to data viz and back again**
Guest lecture for Northeastern University's MS in Media Innovation and Data Communication
- Oct 2023 **Cities of Stories: Storytelling beyond maps**
Guest lecture for Syracuse University Architecture's ARC 500 Cities of Stories: Mapping Contemporary Urban Landscapes
- Towards a Heuristic for Demand Driven Adaptive Pressure for Airports: A Global Perspective**
Poster and panel presentation for Urban Solutions and Sustainability R&D Congress 2023
- 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, Jun 2023 **Kontinentalist Data Storytelling Workshop**
1-day workshop to teach professionals 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
Poster and panel presentation at the inaugural edition of the symposium, held in tandem with World Cities Summit 2022
- 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**, G Newmark, "When Girls Just Want to Have Fun, How Do They Go?", forthcoming full paper
- **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

AWARDS

- 2024 **Category winner.** A Woman’s World: Creating spaces for joy, leisure, and resistance in South and Southeast Asia, One World Media Awards (UK) 2024 - Innovative Storytelling.
- 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.
- Silver.** A Woman’s World: Creating spaces for joy, leisure, and resistance in South and Southeast Asia, Information is Beautiful Awards 2023.
- Award of Excellence for Design (Features) & Illustration.** “What’s the state of Southeast Asian sci-fi?”, Society of News Design Awards 2023

SELECTED SKILLS

- **Programming languages:** JavaScript, HTML, CSS (6+ years); Python (8+ years)
- **Web development:** Vue, Svelte (4+years)
- **Languages:** Native fluency in Filipino, English; Business German (Goethe-Zertifikat C2), Intermediate French (B1)
- **Domains:** Geospatial analytics, probability and statistics, spatial statistics, logistic regression, survival analysis, travel demand modelling, network analysis, K-means, tSNE, uMAP
- **Visual skills:** Data visualization and storytelling, graphic design, urban design, report layouting
- **Software:** Adobe Suite, Microsoft Office Suite, QGIS, Figma
- **Interfacing skills:** Public speaking, narrative development, negotiation, mediation, facilitation, project management, policy development

REFEREES

Sam Joyce, Ph.D.
Associate Professor
Architecture & Sustainable Design

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Loh Peiyong
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