# Bianchi Dy

k 2025 PORTFOLIQ \

## Hi, I'm Bianchi.

## I research, tell stories with data, code, sing, dance, design and make art in order to plan cities.

My journey from environmental engineering to urban planning has been driven by my fascination with translating complex data into compelling visual stories that shape real decisions. I've found my niche working on projects where we collect and analyze our own data like when I helped the Singapore Aviation Authority plan for future aviation travel patterns, proposed street improvements that excited the Four Corners community, or led an award-winning team exploring women's access to leisure in cities.

What energizes me is the intersection of data storytelling, multimodal mobility solutions that enhance wellbeing, and strategic planning that creates vibrant streetscapes for both the day and night. I thrive when working across the entire process—from research through implementation—which makes me well-suited for urban and transportation planning roles.

I'm committed to bridging the gap between technical analysis and practical applications that improve how people experience cities. My ability to simplify complex ideas into accessible visuals, combined with my hands-on approach to collecting meaningful data, allows me to develop solutions that not only look good on paper but make a genuine difference in the communities I work with.







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## **When Girls Just Want To Have Fun, How Do They Go?** A Mixed Methods Study on Nighttime Leisure Travel in Boston

ROLE Researcher, Designer, Fabricator

#### ABOUT

- Independent research, master's thesis TYPE
- LOCATION(S) Boston, USA Berlin, Germany
- DATE Summer 2024 to 2025
- Adobe Suite, Figma, Python, R, QGIS, TOOLS Mapbox
- SKILLS Data analysis, interviewing, woodworking, report writing

The popular image of the city is characterized by depictions of leisure "off the clock", as evidenced by the most popular TV shows However, transportation planning and research almost entirely ignores nighttime leisure travel, continuing to focus on day and night work commutes. But access to jobs is not the only factor in creating vibrant, livable, globally competitive cities - "off-the-clock" leisure activities are just as critical.

This project investigates nighttime leisure travel in Boston across demographics and modes. I find that women are more likely than men to participate in nighttime leisure, particularly though shorter but more frequent social visits; that women are likelier to be passengers and men drivers; and that ridehailing services combined with travel in groups are the most common mode for student populations in Boston. However, perhaps due to Boston's urban form, walking is a close contender.

#### MY CONTRIBUTIONS

- Documented new findings in gendered nighttime leisure travel behaviors and authored scientific journal articles (forthcoming)
- Conducted exploratory data analysis and travel demand modeling using Python and R to identify travel patterns across demographics, trip purpose and mode preferences
- Prototyped participatory mapping method to collect data on how people get home from nighttime leisure activities and why they choose these modes
- Designed physical data experience using QGIS, Mapbox, cork, wood and thread to collect nighttime leisure travel data on mode, trip purpose, memories and decision making around nighttime travel

#### UNDERSTANDING NIGHTTIME LEISURE TRAVEL THROUGH GUIDED DATA EXPERIENCES





ON-LETSUR

PUBLICATIONS

#### DEFINING "NIGHTTIME LEISURE" IN THE ABSENCE OF FIXED DEFINITIONS



#### TRAVEL BEHAVIOR DIFFERS BY PURPOSE, ACCESS AND EGRESS



#### PRESENTATION AT 105TH TRANSPORTATION RESEARCH BOARD ANNUAL MEETING



**B** Dy and G Newmark, When Girls Just Want to Have Fun, How Do They Go? Mobility of Night-time Leisure in Greater Boston in Innovative Transportation Planning Modeling and Analysis Methods and Tools, Poster Presentation, 105th Transportation Research Board Annual Meeting, Jan 2025, Washington, DC

## A new world of airports: forecasting aviation networks in 2050

- ROLE Project Manager, Researcher
- TYPE Commissioned research, collaboration with Netherlands Aviation Consultants (NACO)
- LOCATION(S) Singapore, Singapore
- DATE May 2021 Aug 2023
- TOOLS InDesign, Illustrator, Figma, Python, R, QGIS, Observable, OAG Global Airlines Schedules Tool, JavaScript, HTML, CSS, Vue
- SKILLS Project management, report writing, data storytelling

ABOUT

Aviation mirrors the expansion of urban centres through increased airport-city links, infrastructure enhancements, and passenger numbers. These have all accelerated over the last two decades, especially in Asia and Africa. The industry supports vital information flow of people and goods, and it is a key driver of countries' economies and business productivity, despite the recent impacts of COVID on commercial travel.

This project explores how the symbiotic relationship between global aviation networks and urban centres will evolve and grow in response to projected changes in city populations and economic indices. By 2050, the combined forces of population and GDP shifts are likely to change the configuration of the global aviation network from concentration in London, Paris and Amsterdam to rising aviation hubs in Asia, e.g. Dhaka, Delhi, Seoul, Kuala Lumpur, Manila.

#### **MY CONTRIBUTIONS**

- Authored I white paper documenting forecasting meth-• odology that informed strategic planning for Changi Airport, the Singapore Aviation Authority and NACO
- Designed and built data visualizations and maps, as well as website showcasing findings for client use
- Analysed I Gigabyte of global airlines schedule data (1990 to 2022) from Official Aviation Guide (OAG) data tool to create 2023 international and domestic flight networks and to forecast 2050 aviation network
- Forecasted future airport infrastructure demands by using network science, gravity models and data on city-level economic indicators and flight coverage of emerging transportation technologies

#### **GLOBAL AVIATION HUBS WILL SHIFT TO ASIA BY 2050**



### PUBLICATIONS **VIEW WEBSITE**



#### ADVANCEMENTS IN AVIATION FUELS COULD LEAD TO **AIRPORT INFRASTRUCTURE CHANGES**





#### **PROCESS DIAGRAM**



**B** Dy, A Meeran, A Agarwal, SC Joyce, The New World Order: Forecasting Future Aviation Demand in Science of Cities Symposium., World Cities Summit 2022. READ

**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. READ

## **+** Revitalizing Four Corners Main Street

#### ROLE Consultant

- TYPE Client work / Practicum
- LOCATION(S) Dorchester in Boston, USA
- DATE September to December 2024
- TOOLS InDesign, Illustrator, Photoshop
- SKILLS Report writing and layouting, mobility analysis, interviewing, stakeholder engagement, strategy

#### ABOUT

Four Corners Main Street in the Dorchester neighborhood of Boston faces many economic and cultural challenges, from a lack of foot traffic and distinctive street character, to large swathes of inactive, underutilized ground floor space, to threats of gentrification. Between September and December 2024, our team of nine students worked with Four Corners Main Streets executive director Marcos Beleche, local business owners, other community partners to develop a menu of strategies to strengthen the Four Corners commercial corridor. Our final report presents a diverse menu of solutions, focused on increasing safety, vibrancy, community engagement, and providing resources and funding to make these ambitions a reality.

#### MY CONTRIBUTIONS

- Wrote overall analysis and independently prepared final report for client and stakeholders
- Conducted site visits, interviews and desktop research on • previous Four Corners economic strategies to determine gaps in current management approach
- Designed engagement materials and conducted public meetings with residents and business owners
- Independently developed a comprehensive pedestrianization and funding strategy for the Harvard St/Bowdoin Ave intersection to increase sense of safety and distinctive street character



#### MENU OF INTERSECTION DESIGN OPTIONS AND ACCOMPANYING COSTS

#### Proposed Strategy: Intersection Redesign

Ave to specific days/times (\$)

After speaking with residents,

we noticed that Bowdoin Ave

has been a consistent source

street parking in place. This

can be achieved through a

mix of physical infrastructure

(planters) and asphalt art.

of almost-collisions. We

We propose a step-by-step approach to improving pedestrian experience at the main Four Corners intersection, primarily through curb extensions.



Asphalt art (\$) can help extend visible curbs and make an intersection visually appealing. Local companies or Sherwin-Williams can sponsor paint. A local artist can design the art, or there can be a participatory event where residents draw their ideas of what the intersection could look like. Painting the intersection could help engage residents and business owners in a multiweek event.



pedestrians while still allowing and cooling to paved areas.



deterrents to prevent cars

from overshooting driving

lanes and move into the curb

Signal walk timing (\$\$\$) would prioritize pedestrians over cars at the intersection. Installing new signals would extensions. They also increase require the help of engineers the intersection's visual respite and experts and capital costs. suggest restricting the street to and provide additional greenery This is an intensive long-term improvement and would require technical support from the City of Boston's Transportation

Department.





#### - Potential Partners









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PUBLICATIONS

**Revitalizing Four Corners Main Street** 

#### SITE VISITS AND CITIZEN ENGAGEMENT WITH VOTING ON PREFERRED INTERVENTIONS

To make this intersection improvement a reality, we have identified key partners and their contact information.

	Purpose	Website	Contact Information
Art Program pies	Funding up to \$100,000 and technical support in service of the following goals: → Improving street and pedestrian safety → Revitalizing and activating underutilized public space → Promoting collaboration and civic engagement in local communities	Grant Webpage https://asphaltart.bloomberg, org/grants/ Asphalt Art Safety Study https://assets.bbhub.io/dotorg/ sites/43/2022/04/Asphalt-Art- Safety-Study.pdf	Email arts@bloomberg.org. Grant application https://apply.bloomberg.org/ submit
ity	Training organization for teens in NYC and Boston towards creative expression and ca- reers in culture and STEM. They could help to identify and train a young local artist to design the intersection	https://www.afhboston.org/	Creative Services art-design@afhboston.org Address 100 W 2nd St Boston, MA 02127 Tel 617.268.7620 Fax 617.268.7358
portation oston tation	Technical and infrastructural assistance with installing and testing signal walk timing	https://www.boston.gov/depart- ments/transportation	Vision Zero visionzero@boston.gov Department btd@boston.gov

### - Passaic, New Jersey

At the busy intersection of Columbia and Monroe Streets in Passaic, New Jersey, there were 32 car crashes (including three involving pedestrians and one involving a cyclist) between January 1, 2020, and April 1, 2023. The city has installed a new asphalt art project at the intersection, including colorful curb extensions to shorten crosswalks and a mural in the center of the intersection to emphasize that the area is not only for cars but also for pedestrians and cyclists [5].





A successful demonstration project revealed that 95% of residents wanted a more permanent art installation to address safety issues.

Neighborhood Columbia Avenue & Monroe Street Passaic, New Jersey

Lead Partners **City of Passaic** EZ Ride

Design: \$3,000 Labor: \$14.802 Materials: \$7,198 In Kind: \$5,000 (supplies, professional services)

Funding Bloomberg Philanthropies Asphalt Art

Number of residents engaged 575

Materials Paint, Shark Grip Additive and Sealer Delineators from Sherwin-Williams

Square Footage of Artwork 4248

A SAFE FOUR CORNERS 25

#### AGING COMMUNITY

## **+** Made in Tangshan: Adaptive Reuse of Industrial Heritage

- ROLE Urban planner, GIS analyst
- TYPE Summer urban design workshop
- LOCATION(S) Beijing, China Tangshan, China
- DATE Summer 2024
- TOOLS Illustrator, Indesign, Photoshop, Figma, Python, QGIS
- SKILLS Report writing and layouting, urban design, strategy, mobility analysis

#### ABOUT

The joint MIT-THU Urban Design Workshop in summer of 2024 investigated post-industrial development in Tangshan, China. Not only is the city government of Tangshan looking for new ideas for regenerating its abandoned ceramics factory complexes, but it must also do so amidst a severe real-estate crisis and demographic shrinkage in China, where the top-down structure of government outlays to help finance municipal projects has dried up. At the same time, China's urban development financing mechanisms are being questioned and reimagined.

The workshop, involving myself, 9 MIT and 10 THU students, as well as several MIT and THU faculty members from the Urban Planning and Architecture departments, focused on five former pottery factory sites, located in the east of Tangshan Central City. Our role was to come up with new concepts for the regeneration of these factory sites. Our final concept breathes new life into Tangshan's rich industrial heritage by bridging both facilities for the aging population with those for new families and creatives.

#### MY CONTRIBUTIONS

- Presented final strategic plan concept to Tangshan's planning bureau chief and regional economic development board
- Conducted in-person site visits and exploratory data analysis of pottery factories and surrounding neighborhoods
- Conducted GIS analysis of neighborhood amenities such as shops, healthcare facilities, schools and open spaces; because data was not readily available from government sources, I relied on a mixture of street observation, Open Street Maps, and confidential data packets to conduct this analysis
- Developed concept plan for regeneration of ceramics industry heritage
- Designed street sections and concept materials



PUBLICATIONS



Adaptive Reuse of Industrial Heritage in Tangshan



Adaptive Reuse of Industrial Heritage in Tangshan - Final Report - MIT-Tsinghua Joint Urban Design Workshop - June 2024. READ THE REPORT

## A Woman's World: Creating Spaces for Joy, Leisure and Resistance in South and Southeast Asia

ROLE Project manager, data analyst and visualization designer

#### ABOUT

TYPE Data journalism

- LOCATION(S) Singapore, Singapore 10 cities across Philippines, Cambodia, Pakistan, India
- DATE Summer 2022 to 2023
- TOOLS Adobe Suite, Figma, Python, R, QGIS, Mapbox, HTML, JavaScript, CSS, Svelte, Interviews, Focus Group Discussions, **Participatory Design Methods**
- SKILLS Project management, data analysis, interviewing, storyboarding

Women in South and Southeast Asia continue to face numerous physical, social and economic challenges in accessing public spaces safely. Nowhere is this more apparent than in the pursuit of leisure in public spaces. often considered dangerous and full of risks for women. This data story investigated how feminist and queer organisations across South and Southeast Asian cities have pioneered innovative ways to create spaces for leisure, joy and resistance. Their existence and work challenges preconceived notions about women's safety, propriety, and gender-based discrimination in urban and rural settings, and our work aims to provide an Asian perspective to the underexplored question of who gets to access the city. Combining interviews, focus groups, and surveys with a deep knowledge of multimedia storytelling techniques and web development, we visualized our key finding as one all-encompassing illustration of a utopian city.

#### MY CONTRIBUTIONS

- Managed a team of 8 (writer, designers, illustrator, web • developers) as well as external partnerships
- Interviewed 10 grassroots groups across 10 cities and 6 countries (Philippines, Indonesia, Cambodia, Pakistan, Bangladesh, India) to identify common problems and solutions around the problem of access to leisure across physical, social and economic scales
- Analysed survey data, interviews and focus group discussion responses to identify challenges and solutions to women's access to leisure
- Designed data visualizations in Figma, Observable and Python and worked closely with designer and illustrator on sourcing culturally sensitive visual references
- Prepared grant applications and budgets

#### FROM FOCUS GROUP DISCUSSIONS TO MAP OF A UTOPIAN CITY WHERE YOU CAN ACCESS LEISURE WITH EASE

	What solutions have women created to champion leisure for themselves?
How would you what does your provided of upenonce	Interviews and focus group discussions were held with key groups and organisations run by women and gender pan-conforming persons, who shared their experimense and thoughts on creating sofe spaces for leisure. Quotes have been edited for length and clarity.
	Hover on the quotes to enlarge them
and any further shit with the state of the s	Skip interactive section →
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#### PUBLICATION

#### **READ THE ARTICLE**

#### A Woman's World: Creating Spaces for Joy, Leisure and Resistance in South and Southeast Asia

#### ANALYSIS OF INTERVIEWS AND FOCUS GROUP DISCUSSIONS

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	Catagory (Physical, social, score mic)	What is the contest of the challenge?	Source	Organization	City	Country	
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Nethods & Rundown		
Agenda	Facilitation Methods	Tools
What does your ideal safe space look file? (20) Participants share and describe the ideal safe space according to them	Facilitation will prepare five (5) phonor of a public space with different characteristics (printed on a single bound) and show the photoe to participants. Positigonts will be no colorist of identify what they generative as solo and what is provived as unsafe using gener (pickly and ned printify) dots. In the discussion session, we will review the hoster and discuss the masses.	Red and green sticker dets
What are the social barriers that prevent you from accessing and navigating Solo to the fulleet? (20') How about the physical barriers?	Pacifiation will ask participants to store about "I What is here therein public place in doubt 2 what is a basis in Solid ray about swalls to plo table wan role bon is (what ever the massers) ? The answer will be written in obligh notes by each participants and discussed abawards with following quastions: about the participant of the prime of physical them about the series space? What parents you taken going physical them about the series space?	Sidoy noles Flip chart paper
Break (10')		Snack
If this Solic reads were clear and had less congostion, what would novigating Solice to play (2014) and the solic reads of the solic reads of the ingright they can draw on a plotter or put packit notes on the plotter of the tareast. Be more soccessible to others?	Facilitators we distribution free [3] copies of a street photo to participants and parent them to distribution (and inclusion) with could be improved with the following prenet: be note a schol? Be more scalable to softens? Be more scalable to your needs?	Street photo (3 options) Tracing/banoparent paper Permanyot morker / Artime
Be more withind to your needs? Who is an off the two biggest differences in your routine since Women on Whools and other community programs by Kota Kita, and initiatives / policies implemented by the government? What drives would you like to give to your city administrative authorities when it comes to making Solo more accessible and aste for women? won	Footbacters will ask participants to discuss the following prompt: - How you ever participanted in or scene campaignolized/when that encourage you to enjoy patke space? - What is your advice and hopes for the city government to make Solo more accessible and solo for women?	Siday notes Filp chart paper

![](_page_6_Picture_32.jpeg)

Photo 3 - Safe Characteristics Munction, timely Market/commany, public, dayle

What makes/would make it unsafe?	What makes/would make it safe?
Too crowded	Balanced crowd. This is especially good and expected in a market setting
	Presence of womon morchants. Especially because they're known to be strong and wood!
Cramped or closed space	Open space and easy access to roads (this means that if anything goes wrong, you can easily run)
Sense overload - noise, small	Cleanliness and lidiness

#### AWARDS

#### **Category winner - Innovative** Storytelling. One World Media Awards (UK) 2024

Silver - People, Places and Spaces. Information is Beautiful Awards 2023

Silver - Best Data Visualization. WAN-IFRA Digital Media Awards – Asia 2023

(3)

## Digital Tools for Planners to Analyse Public Feedback

- **ROLE** Project manager, researcher
- TYPE Commissioned research by Urban Redevelopment Authority (URA) of Singapore
- LOCATION(S) Singapore
- DATE 2019-2020, 2021-2023
- TOOLS Figma, Pandas, Leaflet, HTML, JavaScript, CSS, Svelte, Machine Learning (K-Means, DBSCAN, tSNE, UMAP)
- SKILLS Project management, data analysis, storyboarding, data visualization design

ABOUT

High-quality dialogue between the government and the public is a necessary component of the urban planning process. Data from public surveys, online feedback portals, and social media platforms are standard sources of public opinion on current issues and developments. However, deriving area or issue-specific insights from unstructured text requires planners to read individual messages - a tedious and siloed process that prevents planners from learning across related issues and cases. We worked with planners to understand their workflows, their use of citizen feedback in day-to-day decision making, and their key concerns in reading feedback. We developed mapping tools and a workflow to process unstructured text using natural language processing and machine learning into clusters or 'topics', with an emphasis on identifying and assessing the quality of persistent ('evergreen') and 'emergent' topics across time.

#### MY CONTRIBUTIONS

- Independently prepared well-received final client report that documented algorithms, use cases and user interviews, which was praised for its clarity and completeness by senior management of URA
- Conducted exploratory data analysis and mapping using Pandas/GeoPandas/Seaborn to identify feedback hotspots
- Discovered an organized petition by local neighborhood groups to save building slated for demolition explained the highly uneven spread in the feedback messages.
- Prototyped mapping approaches based on use cases from planners working with individual messages
- Explored alternative data visualization techniques to find trends in messages

## **TOPICS ACROSS SINGAPORE BY DIFFERENT**

![](_page_7_Figure_17.jpeg)

MAP RESOLUTIONS build, unit, plan, gfa, floor, house, plot, exist, attach, roof

change, unit, business, shop, premisue, build, apply, commercial, space, industrial

roperty, unit, rent, private, tenante, home, stay, owner, house, month

reet, address, company, send, transcation, contact, update

event, plant, city, space, school, student, year, forward, datum, visit

esident, block, walk, place, noise, issue, work, photo, traffic, concern

olan, application, attach, require, request, submit, submission, project, acount, work

park, car, season, vehicle, renew, notice, carpark, payment, appeal

![](_page_7_Picture_26.jpeg)

ROCHOR

#### **Digital Tools for Planners to Analyse Public Feedback**

- 2. Exploration of topic locations over time by hexplots
- 3. Concentrations of topics by planning districts in 2019
- 4. Locations of topics by specific coordinates within planning districts
- 5. Alternative data visualization of topic evolution using temporal trees, with options for persistence-based coloring and parent-based coloring. The shape of the tree changed according to whether we let topics emerge organically or seeded specific keywords to form a topic

## **A** Shape Grammar Grasshopper Plug-in

ROLE	Developer
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- TYPE Research
- LOCATION(S) National University of Singapore
- DATE Nov 2016 to July 2018
- TOOLS Rhinoceros, Grasshopper, IronPython
- SKILLS Programming, scientific writing

#### ABOUT

Shape grammars are a type of formal grammar used to generate and analyze geometric shapes. They use rule-based approaches to define how shapes can be transformed and combined, and have been used in fields such as architecture, design, and computer graphics to create and explore generative designs. To make shape grammar specification easier for architects and designers, I developed an API and a Grasshopper shape grammar interpreter plug-in (or the "SGI plugin") using Python and RhinoCommon under the supervision of Dr. Rudi Stouffs. This was built on top of the Sortal Grammar Interpreter engine built by Bui Do Phuong Tung, which built on previous research about shape grammar interpreters and implemented grammars through a graph-based approach.

#### MY CONTRIBUTIONS

- 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
- Simulated design grammars for research project on floor layout of Chinese high-speed rail stations
- Wrote documentation and tutorials for Rhinoceros and Grasshopper packages
- Co-authored conference paper about the advancements • represented by the packages

![](_page_8_Figure_15.jpeg)

![](_page_8_Picture_16.jpeg)

![](_page_8_Figure_17.jpeg)

![](_page_8_Picture_18.jpeg)

#### A Shape Grammar Grasshopper Plug-in

I was also independently responsible for implementing rules that mimicked the logic of blocks from Froebel's building gifts, from conceptualization on paper to modelling with the SortalGI plugin.

The plug-in supports shape emergence, visual enumeration of rule application results, and the parametric definition of shapes and shape rules even when selecting a non-parametric rule matching mechanism.

![](_page_8_Picture_23.jpeg)

#### PUBLICATIONS

**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

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## + Do Play Play: An interactive exhibition about the power of play

- **ROLE** Data visualization designer
- TYPE **Collaboration with Playeum**
- LOCATION(S) Bedok, Singapore
- DATE Summer 2023, in less than 2 weeks
- TOOLS Figma, Physical Fabrication (Wood, Paint, Thread, Scrap Materials)
- SKILLS Research, feature writing, fabrication, data visualization design

#### ABOUT

When was the last time you played as an adult? As we grow older, "play" becomes increasingly seen as just for kids, or even as frviolous. This view negates its longterm benefits for adults.

Kontinentalist partnered with Playeum for the Everyday Creativity Festival to produce two interactive exhibits to make a case for why play is important. These research-backed displays invited participants (both adults and children) to contribute their experiences. Participants were guided to use yarn to track what parts of their day they spent on rest, work, and play. We also asked audiences to share their definitions of play through post-its and stickers, to encourage reflection on how activities seen as "play" change as people get older.

#### MY CONTRIBUTIONS

- Conducted exploratory data analysis and research on cognitive science around play and different types of play modes
- Designed and developed interactive data experiences using scrap materials in less than 2 weeks
- ◆ Analysed findings from exhibition participants' contributions to create final report for Playeum

#### **SEE IT LIVE**

![](_page_9_Figure_16.jpeg)

![](_page_9_Figure_19.jpeg)

![](_page_9_Picture_20.jpeg)

## +Lonely Vectors Exhibit: Global and Urban Flows

- **ROLE** Researcher, data visualization designer
- TYPE Commissioned exhibit piece and booklet material by Singapore Art Museum
- LOCATION(S) Tanjong Pagar, Singapore
- DATE Jun to Sep 2022
- TOOLS Illustrator, Figma, Python, JavaScript, HTML, CSS, Mapbox
- SKILLS Research, feature writing, data visualization design, GIS

#### ABOUT

Lonely Vectors was an exhibition at the Singapore Art Museum focused on drawing attention to the uneven distribution as a result of fault lines, choke points, exclusive zonings and infrastructural politics that shape the global economy. The museum commissioned an accompanying data visualisation which translated three specific global networks into speculative maps:

- the Internet's physical cable infrastructure,
  destruction of rainforests,
- 3. smart city initiatives,

In collaboration with a designer, I produced three infographics for publishing on two mediums; a printed exhibition catalogue and a 8m by 2m wall vinyl.

#### MY CONTRIBUTIONS

- Sourced datasets on Internet's underwater cable infrastructure, rainforest cover and conditions in Southeast Asia, and smart city commitments made by national governments
- Prepared maps using Python packages (GeoPandas, Seaborn, Modin) and QGIS
- Designed data visualizations and wrote research summaries for each of the themed maps

#### **SEE IT LIVE**

![](_page_10_Picture_19.jpeg)

#### Lonely Vectors Exhibit: Global and Urban Flows

![](_page_10_Picture_22.jpeg)

![](_page_10_Picture_23.jpeg)

![](_page_10_Picture_24.jpeg)

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![](_page_10_Picture_26.jpeg)

## + Drawing the City: 2016 - 2025

![](_page_11_Picture_2.jpeg)

#### ABOUT

In my last year of university, I took an elective on Graphic Storytelling and was told during the first class that my "drawings were sh\*t" by the instructoranimation veteran Hans Bacher. But he quickly followed this up with "you should go to life drawing class." So I did – starting what is likely a lifelong affair with creating and appreciating figurative art. As I read more drawing books and attended classes, I began to look at both code and drawing as two sides of the same coin. Both have basic concepts and workflows that everyone needs to learn in order to become more skilled, require deep technical knowledge of the limits of the medium or programming language in order to produce efficient, effective, expressive art or code.

#### SOME FUN LITTLE ASIDES

- When I lived in Singapore and took public transit, I drew passengers. This honed my ability to capture important information in quick gestures.
- The figure drawing community in Singapore outside of schools is composed of both hobbyists and professional artists. One of the biggest struggles in hosting sessions is finding affordable venues that can accommodate enough participants to cover the cost of the venue and the model. Organizers have no profit margins-this is a community-driven effort.
- I organized bi-monthly sessions from 2019 to 2020, sourcing both venues and new models. This series of posters advertising the sessions contains works by me and my fellow artists Denis, Fanny, Bel, Damien and Chit Seng.

![](_page_11_Picture_9.jpeg)

![](_page_11_Picture_10.jpeg)

![](_page_11_Picture_11.jpeg)

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