Elisa Ngan
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ELISA NGAN
PRODUCT X DESIGN X NARRATIVE

Trained as an architect with extensive experience in productizing connected environments. Passionate about designing jobs for long-horizon challenges and developing software to help people do meaningful work.

EDUCATION

2022	**Master in Design Engineering**
	Harvard University Graduate School of Design
	Harvard University School of Engineering & Applied Sciences
	Thesis:
	Designing Ethical Data Models for Experimental Data Governance
	Advisors:
	Andrew Witt, Harvard Graduate School of Design
	Michael D. Smith, Harvard School of Engineering and Applied Sciences
	Tom Dayton, IBM

2013	**Bachelor of Arts, Architecture**
	Minors:
	City & Regional Planning
	Environmental Design & Urbanism in Developing Countries
	University of California Berkeley College of Environmental Design

PRACTICE

2022	**Consultant, Certain Measures**
	Domain: Design Science, Transcalar Design, Creative Studio
	Producing design collateral for internal projects.
	Riyadh World Expo 2030, Semi-finalists for RFP
	Twilight Crystalline Models Hunt Wistfully Model Behavior Exhibition
	NDA – Data Visualization

2022	**Principal Product Designer**, **Windfall**
	Domain: Wealth Intelligence, Non-Profit / Philanthropy, Contextual Analytics
	Designing a generalized object model for graceful scaling across future applications aligned to product strategy and organizational functions. Features designed and delivered include:
	Data Model Manager
	Contextual Analytics
	Facilitating and bridging between VP of Product and CTO on software architecture while developing hiring strategy and design operations for new design team.

2021	**Design Fellow, United States Citizenship & Immigration Services**
	Domain: Federal Government / Civic Tech, Citizenship & Immigration Services
	Ran service design workshops to elicit existing processes and pain points from asylum officers and supporting subject matter experts.

Prototyped tooling and workflows for asylum officers that streamlined case adjudication procedures.

Developed internal design tool to bridge legal terms, displayed product terms, and internal object names to demonstrate mapping of legal terms across multiple applications.

Educated internal stakeholders on digitization strategy and socio-technical construction of platforms.

2019 – 2020	**Product Design Lead, Tulip Interfaces**

Domain: Manufacturing & Industrial Operations, Industrial IoT, Low Code / No Code
Scaled and matured design, engineering, and product operations across the organization while being responsible for partnerships, product strategy, and delivery across IoT and Enterprise product lines. Features designed and delivered include:

- Role-based access control and asset management
- Fleet management for IoT device digital twins
- Virtual shop floor set-up and testing
- CNC machine interface and job management

Worked with partners to develop integrated product roadmap and product vision, securing $1M+ budget over 3 quarters.

Elicited business and functional requirements with internal and external stakeholders by working directly with buyers to understand their IT and OT needs and setting up browser-based community forum to gather continuous user feedback; products shipped with 100% client satisfaction across top 5 accounts.

Conducted literature reviews to understand problem architecture, technical challenges, and latent user needs.

Shepherded design through the product development lifecycle by producing all workshops and design artifacts necessary to drive decision-making, synthesizing and presenting findings and conclusions across the organization for both technical and non-technical audiences.

Recruited and mentored design team members; helped grow team from 2 to 5 members.

Sample Clients: Piaggio Fast Forward, DMG Mori, Jabil, Taza Chocolates, Formlabs, MasksOn.

2016 – 2018	**Product Designer, Treasure Data**

Domain: Customer Data Platform, Data Management
Responsible for data management product features spanning graphical user interface (GUI) and command line interface (CLI). Features designed and delivered include:

- Reusable data transformation workflows
- Data integrations browsing, set-up, and management
- Information architecture and product navigation re-factor

Collaborated with product manager to help drive product category pivot; led research initiative to understand the organizational types that will inform sales and product strategy, as well as the existing and future user roles that will need to exist in the product space to inform curriculum design and product features; developed a research agenda to understand how to bridge technical workflows to non-technical users.

Sample Clients: Dentsu, ABInBev, LG, Mattel, Subaru, Linden Labs

2015 – 2016   **UX Design Consultant, eBay**
Domain: Classifieds / E-Commerce, Emerging Markets
Produced task flows, wireframes, and brand guide for hand-off to developers, including research into competitive product features.

2015 – 2016   **Digital Architect Consultant, SeatGeek**
Domain: Sports and Entertainment, Re-Sale Ticketing
Developed automated workflow between Rhino and Illustrator for venue seating maps.

2013 – 2015   **Staff Architect, Hellmuth, Obata, & Kassabaum (HOK)**
Domain: Sports, Recreation, & Entertainment, Architecture, Engineering, & Construction
Brought onto a small team to expand and innovate on traditional architectural practice. Projects include:

Client	Project
Spurs Sports & Entertainment	AT&T Center
UC Davis	Student Activity Recreation Center
City of Seattle, Seattle Sonics	Seattle Arena
YoungLife	Woodleaf Camp

Produced material to drive business development in both public and private sector; designed decks, books, and research studies to secure unanimous civic approval from Seattle Design Commission, institutional funding from UC Davis capital projects, and public funding for YoungLife.

Traditional architectural support in placemaking, programming, environmental design, BIM modeling, shop drawing production, and construction documentation.

2011 – 2013   **Space Planning Intern, Taylor**
Domain: Healthcare, Hospital Space Planning
Picked up redlines and surveyed hospitals for code compliance.

ACADEMIC

2022   Assistant Professor of Practice, Urban Technology
University of Michigan, Taubman College of Architecture of Urban Planning
        UT230: Urban and Design Inquiries

2022   Teaching Fellow, Michael D. Smith
AC221: Critical Thinking in Data Science
Harvard School of Engineering and Applied Sciences

2020   Research Fellow, Fawwaz Habbal

Computational Models of Personalized Aging-in-Place
Social Technology for Global Aging Research Group
Supported by Jiangsu Industrial Technology Research Institute

2021 – 2022	Research Assistant, Martin Bechthold Material Perception of Sustainability Materials Processes & Systems Research Group Supported by Harvard Joint Center for Housing Studies
2019 - 2021	Research Assistant & Teaching Fellow, Andrew Witt STU1231: Collaborative Design Engineering Studio Harvard School of Engineering and Applied Sciences Harvard Graduate School of Design
2021	Teaching Fellow, Elizabeth Christoforetti ENGSCI285: Design Theory and Practice Harvard School of Engineering and Applied Sciences Harvard Business School

2020 – 2021	Associate Editor, Harvard GSD Pairs Student Journal
	Articles:
	     Sara Hendren, On Help
	     Paola Sturla, On Objectivity

2020	Design Researcher, Olivetti Visions, Festival of Architecture in Ivrea Mound Exhibition
2019	Co-First Author, IEEE Supercomputing Conference CHAMPVIS: Comparative Hierarchical Analysis of Microarchitectural Performance
2019	Invited Panelist, Harvard Kennedy School Arts & Culture Caucus The Creative Economy and the Future of Work
2019	Invited Panelist, Harvard Business School Technology Club Product Management Workshop: Design
2018	Design, Harvard Kennedy School Community Development Program Informal Childcare, Boston
2018	Invited Lecturer, The Free School of Architecture Architects & Power in a Digitized Age
2012	Apprentice, CoreNet Global Real Estate
2011 – 2013	Founding Member & Recruitment Chair, Alpha Rho Chi

VOLUNTEER

2016 – 2019	Founder, Design for Ability
2015 – 2018	Member, Hearing Loss Association of America, East Bay Chapter

SKILLS

Strategy
Domain Modeling
Workshop Design & Facilitation
Diagrammatic Communication
Presentation & Publication Design
Branding & Advertising Strategy
Data Ecosystem & Strategy

Research
Contextual Inquiry / Fly-on-the-Wall / Site Recon
Stakeholder, Buyer, and User Interview Design
Literature Review
Systems Analysis
Data Analysis
Service Design & Mapping
Jobs-to-be-Done & Persona Development
Task Analysis
Product Validation
Usability Testing
Experiment Design
Tools: Python, Excel, Airtable, Hand-Coding

Digital Design
Data Modeling & Software Architecture
Wireframing & Dynamic Prototyping
Design Patterns, Components, & Systems
Visual Design & Graphic Design
Data Visualization & Content Modeling
Tools: Tableau, Sketch, Figma, Framer, Webflow, Illustrator, InDesign, Photoshop,
OpenFrameworks, Grasshopper, HTML / CSS, Javascript, Python, React, Houdini

Physical Design
Concept Sketching
Construction / Shop Drawings & Documentation
3D Modelling & Rendering
3D Printing, Vacuum Forming, Mold Making, Laser Cutting
Physical Prototyping with Silicon, Wood, Acrylic, Resin, Concrete, Hardware Components
Tools: Rhino, Grasshopper, Fusion 360, VRay, C++, Arduino, OpenFrameworks

Product Development
Agile Development
Whitewater Development
Scrum Processes
Product Management & Operations
Design Operations
Product Requirements Documentation & Elicitation
Functional Specifications
Stakeholder Analysis Management

Relevant Courses
Harvard University
    Epistemic Injustice
    Critical Thinking in Data Science
    Digital Government
    Research Topics in Data Visualization
    History of Technology

Computational Design
Leadership in Public Policy
Quantitative & Qualitative Methods in Urban Planning
University of California, Berkeley
Psychological Anthropology
Architecture Theory
Global Poverty
City Planning

Housing
Construction
Structures
Real Estate Development
Economics
Design Strategy
Branding & Integrated Marketing Strategy
Cognitive Science: Perception

Certificates   User Experience Design, General Assembly

Language   Fluent English, Proficient Cambodian, Proficient Teochiu (Chinese Dialect)

Citizenship   United States, New Zealand