

Francis Ken Nakagawa

HARDWARE UX & SYSTEM EXPERIENCE DESIGNER

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EXPERIENCE

IROBOT

- **Principal UX Hardware Designer** 03.2025 – Present
 - Led the design of robot physical interfaces, including buttons, displays, lights, and sounds, ensuring seamless and intuitive user experiences across product families.
 - Fostered cross-functional collaboration with software, mechanical, and packaging teams, aligning design intent from concept to production.
 - Supported advanced design investigations and system-level refinements to improve interaction consistency, quality, and manufacturability.
 - Helped integrate behavioral cues (sound, light, motion) into cohesive product experiences, balancing aesthetics, cost, and engineering feasibility.
 - Partnered with ODM teams in Asia to translate prototypes into scalable, high-quality production-ready solutions.
 - Bridged engineering constraints and user needs, ensuring that every interaction felt deliberate, reliable, and human.
- **Sr. UX Hardware Designer** 02.2023 – 02.2025
 - Designed and refined robot physical and sensory interfaces, collaborating closely with engineers to ensure clarity and coherence across touchpoints.
 - Developed packaging systems that improved unboxing experiences while reducing materials and costs.
 - Built and tested functional prototypes to validate tactile and sensory feedback (button feel, sound timing, LED diffusion).
 - Recruited and conducted in-house and in-home user testing, integrating findings into iterative design improvements.

TOYOTA INNOVATION HUB / (Institute for Creative Integration)

- **Studio Lead** 03.2021 – 08.2022
 - Direct teams in executing design projects, including developing inclusive design guidelines for Toyota's Woven City.
 - Facilitated collaboration with Toyota's advanced design (CALTY) and planning divisions
 - Successfully pitched novel mobility systems to C-level executives
- **Lead Designer** 07.2016 – 03.2021
 - Led a team of 7 in the end-to-end process of research, design, and testing of new forms of autonomous mobility.
 - Used a speculative design approach to change the mindset to speculate about our process and the future.
 - Produced low to high-fidelity prototypes in partnership with engineers.
 - Ran experimental research activities on autonomous vehicles and AI interactions.

EDUCATION

MFA - Design - CALIFORNIA COLLEGE OF THE ARTS

07.2012 – 05.2014

Merit scholarship 2012-2014

BA - Product Design - ISTITUTO EUROPEO DI DESIGN

02.2009 – 12.2011

Class representative 2009-2011

BBA in Business Administration - INSPER

02.2005 – 12.2008

Speaker at the X SEMEAD Congress 2007 - Motivational factors in a consulting company

SKILLS

Approach

- Critical thinking
- Human-Centered Design
- Speculative design

Practices

- Design Research
- UX Design
- Industrial Design
- Ethnographic research
- Speculative Research
- Future Studies
- Inclusive Research
- Inclusive user-testing

Cross-functional Tools

- 3d modeling (Rhino & Keyshot)
- Figma, Adobe CC
- Sewing / e-textiles
- Prototyping / Digital fabrication
- Scent experimentation
- Basic electronics (Arduino)
- Storytelling / storyboarding
- AI SW for audio generation

RECOGNITIONS

- **Design & Emotion 2016**
Paper presenter(Netherlands)
- **Spark Awards**
Finalist (USA)
- **Diabetes Mine Design Challenge**
Finalist in two categories (USA)
- **Design Quest Furniture Design Competition**
Finalist (USA)
- **MiniSpace /FatBoy Competition**
Third place (Netherlands)
- **Tissot Display Design Contest**
Third place (Switzerland)