

Leon Santen^{they he}

currently in Oakland, California

born in Frankfurt, Germany

sustainability engineer • roboticist • complex systems thinker
co-creating life-affirmative climate change solutions

Education

B.S. Engineering: Robotics: Olin College of Engineering

May 2021

#1 or #2 of most innovative engineering institutions worldwide. Why innovative? Because we learned how to work in groups and apply theoretical ideas in the real world. What I really learned was how to teach myself anything!

M.S. Engineering, Sustainability, and Health (MESH): University of San Diego

May 2024

During this time, I chose to invest into learning how to draw digitally to express all my (systems) insights and ideas and find my critical voice by writing dozens of blog posts related to the themes of this program. After almost giving up to find a value-aligned program, I found this radically innovative education container, preparing sustainability organizer to make informed choices in the fields of water-, energy-, waste-, food-, health-, and just human systems, all applied to self-directed real-world projects.

Experience

Secretary for the organization *Engineering, Social Justice, and Peace*

This exciting position allows me to connect engineers who share a decolonial & regenerative value systems. I have met some of the most inspiring engineers in this community. Sometimes, I host retreats in the San Francisco Bay Area, other times I send out emails to organize conferences. Related to my master's capstone project, I have been collecting resources relevant to the social-justice minded engineering community increase our collaboration and care network.

May 2023 - present
Community
organizing



click me
for more info

Learning how to build trans-disciplinary collaboration spaces

My master's community of my program called "Engineering, Sustainability, and Health" consists of many different change-makers. My capstone project was an interface and human-centered design study (including 20 interviews) to build transdisciplinary communication spaces for communities of change-makers, enabling vision-building, emotional sensing, and cooperation across institutional & disciplinary boundaries.

In my life and work, I have always paid close attention to holding space for connecting communication. I have always strengthened my illustration muscle, and as a systems thinker, I naturally think in visuals. I see a great opportunity to improve our current digital interfaces to deepen international cooperation and communication.

Aug 2022 - May 2024
Master's capstone
& life project



Exploration of energy sovereignty & ethical supply chains with the *Just Energy Hub*

I explored technical & social deployment opportunities for a vertical axis wind turbine in off-the-grid & disaster relief settings to empower local communities. I worked as a designer with Olin College students to envision installation scenarios for the wind turbine and guided industrial engineering students from the Cal Poly San Luis Obispo during their capstone for an ethical supply chain design.

Sept 2022 - Nov 2023
Advisory board member
and partnership



Fish-safe water turbine design and fish injury research

As part of Natel Energy's engineering team, I helped to design water turbines that allow fish to reduce eco-system damage. With my help as a data analyst, illustrator, and high-speed videographer, we published a milestone fish-passage study that has helped Natel Energy to establish their reputation as the first fish-safe turbine designers.

July 2021- May 2022
Engineer intern



Off-the-grid energy system design for in an intentional farm community

During COVID, I connected with a farm in North Carolina to host 15 engineering students to live in community and gain experience building off-the-grid systems with a direct human impact. My proudest creations were a large-scale pan-tilt mechanisms for a five solar-panel array and the creation of a wireless system that monitored & controlled the battery system health. I also ran a siting study for a 4 kW vertical wind turbine and prototyped its blade design.

Aug 2020 - May 2021
Community
project



staying in touch...

Leon Santen they
he



leonsanten.info

click me
for more info

Phone

+1 (781) 535-4848

E-mail

lsanten@olin.edu

Portfolio • Website

leonsanten.info

LinkedIn

linkedin.com/in/leonsanten

Skills that are a big part of who I am:

- Always working toward deeper co-operation and knowledge sharing
- Illustrating, drawing, sharing ideas visually
- Woodworking
- DJing, sound healing, cello
- Massage therapy
- Community work, co-creative art
- Dancing
- Baking

Some skills of mine:

- Working with ecosystems and complex living systems
- Illustration design & visual reasoning (Illustrator, Photoshop)
- Intentional (media) communications
- Participatory research & design
- Scientific study design
- Python, C++, R
- SolidWorks, CATIA, FEA
- Electrical prototyping & design
- MATLAB, Simulink, Mathematica, ROS
- CNC Mill, CNC Lathe, MIG Welding, 3D-Printing

My unique strengths as a team member:

I can easily learn new skills

I am a creative & adaptive
problem solver.

I focus on communication in all my work

I thoroughly document my work.

I'm emotionally aware & thoughtful.

My sustainability knowledge & network
spans disciplinary boundaries.

