

DANIELA NAJMIA S LANG

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Bioengineer with experience across machine learning, diagnostics, hardware development, sustainability systems, and emerging technologies. Built and evaluated technologies ranging from genomic diagnostic devices and industrial hardware systems to environmental sensing platforms and early-stage ventures.

EDUCATION

Rice University — Houston, TX

Master of Bioengineering (Applied Bioengineering) — May 2026

Recipient of the Christiaan Scholtz Award for Excellence and Leadership in Bioengineering

Bachelor of Science in Bioengineering — May 2025

Minors: Entrepreneurship; Earth, Environmental & Planetary Sciences

International engineering design in **France, Italy, and the Netherlands** focused on product development and innovation

SELECTED TECHNICAL PROJECTS

Oral Cancer Diagnostic Device (Senior Design)

- Designed and prototyped a genomic brush-biopsy device for early oral cancer detection, achieving 2× higher DNA yield than existing technologies, with 550 ng DNA per sample (1.92 purity)
- Modeled device architecture in SolidWorks and fabricated prototypes via 3D printing
- Conducted validation testing using cell culture models, porcine tissue, and human clinical trial protocols
- Filed provisional patent for genomic diagnostic device technology

Industrial 3D Printing Humidity Control System — re:3D (NASA Contractor)

- Engineered a sensor-controlled humidity and temperature regulation system for large-scale industrial 3D printers
- Integrated humidity sensors, touchscreen interface, and automated dehumidification using Arduino control architecture
- Maintained less than 30% filament humidity vs 50% baseline, significantly improving print reliability in humid environments

Smart Waste & Composting System (Founder Project)

- Smart waste and composting system integrating plastic compaction and accelerated organic waste decomposition
- Arduino-based sensor architecture with proximity sensors, environmental monitoring, Bluetooth connectivity, and app integration
- Led system architecture design and hardware development across a 5+ year iterative prototyping cycle

EXPERIENCE

Founder & CEO | HydroTwin Labs

Jan 2026 - Present

- Developing a machine-learning platform that uses biological response patterns as a validation layer for environmental sensing infrastructure. Developed interactive dashboards and anomaly-detection systems for controlled-environment agriculture.

Founder & Consultant | DNL Ventures LLC, *Houston, Texas, United States*

May 2026 - Present

- Advise founders, investors, and operators on emerging technologies across innovation-driven industries. Conduct technical due diligence, technology assessments, and commercialization analyses supporting strategic growth and market-entry decisions.

Innovation Manager | Life Science Center for Innovation (Hospital Clínica Bíblica), *San José, Costa Rica*

Summer 2025

- Evaluated technical feasibility, commercialization potential, and development strategy for seven prototype-to-seed stage medtech ventures within a hospital innovation accelerator.

- Produced executive recommendations on incubation, product development, and clinical adoption pathways.

Technology & Venture Analyst | Olivo Partners, *San José, Costa Rica*

Summer 2024

- Evaluated engineering feasibility and market potential of 10 emerging technology companies across cleantech, synthetic biology, agritech, biotech, and medtech, including green hydrogen, AI agriculture, organ-on-chip, and medical signal-processing technologies

Human Systems Engineer | Center for Advanced Technology (Sheba Medical Center), *Ramat Gan, Israel*

Summer 2023

- Developed signal-processing systems integrating immersive VR with physiological biomarkers to model affective responses
- Designed analytical workflows linking human behavior, virtual environments, and biological response data.

TECHNICAL SKILLS

Hardware & Product Development: Rapid Prototyping, Sensor Integration, Systems Engineering, Electronics Prototyping

Programming Languages & Software: Python (Advanced), MATLAB (Advanced), Arduino (Advanced), LabVIEW

Design & Fabrication: SolidWorks, CAD Assemblies, 3D Printing, Hardware Testing & Validation

Advanced Methods: Microfabrication, Machine Learning, Environmental Data Modeling, Signal Processing

ADDITIONAL

Languages: Spanish (Native), English (Fluent), Hebrew (Fluent), French (Advanced), Italian (Conversational)

International Experience: United States, Israel, Costa Rica, France, Italy, Netherlands

Leadership: Co-Founder & President BIOEntrepreneurs & RISE LatAm Clubs, Rice University | Director of Education at TAMID

Awards: Christiaan Scholtz Award for Excellence in Bioengineering | SHPE Graduating Senior Spotlight | Medical Innovation

Bootcamp Crowd Favorite Award | International First Place Cadena Initiative Social Entrepreneurship Competition