

XIXI LI

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EDUCATION

Harvard University, Master in Design Engineering CAMBRIDGE, MA, 2027
Massachusetts Institute of Technology cross-registered student CAMBRIDGE, MA, 2027
Columbia University, M.S. in Strategic Communications NEW YORK, NY, 2018
Wuhan University, B.S. in Linguistic and Communications WUHAN, 2017

PROFESSIONAL EXPERIENCE

META NEW YORK, 2022 - 2023

Product Strategy Lead

- Optimized Instagram Creator Monetization product, developed performance-based business models.
- Led product research and design sprints on Instagram interactivity, initiated new gesture interactive formats, increased engagement efficiency by 4%.
- Conducted growth research and content strategy for Facebook VP Analytics on Social Video and Creator.
- Drove a team of 9 in Meta Hackathon, developed Creator Collaboration Portal and won annual winner.

TIKTOK NEW YORK, 2019 - 2022

Sr. Product Marketing Manager

- Managed Shop Ads growth across 5 internal teams and 3 external channels, capturing a **10x** growth rate.
- Developed annual product analysis and led the 2022 roadmap and 4 core experiments programs.
- Led UX research on social commerce analyzed user behaviors and mental models.

Product Marketing Manager

- Initiated go-to-market strategies for branding ads, resulting in MoM growth of **45%**.
- Managed pricing strategies for premium reservation ads with annual **\$730M** revenue portfolio.
- Synthesized inbound product strategy with cross-functionals, led analysis of product research.

PROJECTS AND ACHIEVEMENTS

SIXTH – Physical Intelligence Wearable for Female Athletes CAMBRIDGE, 2026

Product Design · Speculative design · Wearable Systems

- **Role:** *Electrical Engineering · Fabrication · Prototyping · Design Research · Material Testing*
- Developed full sensing and signal-processing architecture, including sensor fabrication, selection, data acquisition pipelines for SpO₂, HRV, core temperature, and sweat sodium channels.
- Designed an on-body actuation layer combining haptic actuators, thermal controls and audio output.
- Fabricated wearable with laser cutting, laser engraving, digital embroidery, machine-sewing, heat pressing, and precision wiring workflows to produce electronic-textile assemblies with reliable sensing and actuation layers.

Electrical Muscle Stimulation (EMS) for Lower Limb Coordination CAMBRIDGE, 2026

Biomechanics · Wearable Systems · Assistive Device

- **Role:** *Research Design · Physiological Signal Processing · Wearable Device Design*
- Designed a within-subject dual-task paradigm across four counterbalanced conditions combining arithmetic cognitive load and calf transcutaneous electrical nerve stimulation (TENS).
- Analyzed physiological data of continuous heart rate, electrodermal activity (EDA), and accelerometer data; identifying differential sensitivity of cognitive load for stimulation.
- Processed bilateral knee and ankle joint angle time-series from OpenCap; computed three coordination metrics normalized to individual baselines to characterize joint-specific responses to cognitive demand and stimulation.
- Designed a modular wearable attachment system addressing interparticipant variability and personalized EMS.
- *Course Project advised by Patrick Slade and the Harvard Slade Lab.*

MIT HARD MODE Physical AI Hackathon

CAMBRIDGE, 2026

Winner Project · ConnectQ Embodied AI as a Textile Interface

- **Role:** Textile and Fabric Engineer, Electrical Engineer
- Developed a knitted conductive wrist wearable as a physiological sensing layer and interface, capturing continuous physiological signals from the body including temperature, position, and pressure.
- Contributed to the LLM-based affective inference pipeline mapping multimodal physiological and gestural inputs to emotional state classification.
- Integrated Arduino Uno Q with touch sensor, IMU, motor, and haptic actuator subsystems; managed signal routing and communication between sensing, server-side processing, and physical actuation layers.

Tactiq – Pressure Sensing Textile for healthcare

CAMBRIDGE, 2025

Computing Fabrics · E-Textile Engineering · Edge AI · Physical Computing

- **Role:** Circuit Design · Electrical Engineering · eTextile Design · Sensor Fabrication · Neural Network Training
- Developed woven textile with high resolution sensing for clinical deployment.
- Designed circuits schematics using ESP32, EasyEDA and managed bidirectional serial communication between microcontroller and software layers.
- Trained a 4-class posture classification neural network, achieving 85.7% real-time accuracy, 0.85 weighted F1 score, and ~1 ms on-device inference latency; implemented quantized edge inference.
- Evaluated silicone formulations, conductive yarn types, velostat geometries, and textile weave structures for signal quality, mechanical flexibility, and fabrication repeatability.
- Course Project advised by Prof. Yoel Fink.

Inflatable TPU Footwear for Rehabilitation

CAMBRIDGE, 2025

Research project · Fabrication

- **Role:** Material Test · Custom G-Code · Fabrication · System Design · Electrical Engineer
- Designed and fabricated a pneumatically actuated insole using flexible TPU filament with a lattice architecture.
- Developed custom G-code scripts to parametrize print geometry per patient morphology.
- Architected the full actuation system: pneumatic channel layout, pressure zone mapping, and inflation sequencing logic for personalized deformation for gait rehabilitation.

Algorithmic Morphogenesis

CAMBRIDGE, 2025

Speculative design · Human-Machine Interaction · BioDesign · Affective Computing

- **Role:** Electronics and Mechanical Engineering · System Design · Signal Processing · Concept Design
- Acquired and processed 4-channel EEG data via Muse 2 and MindMonitor signals; applied denoising, frequency-band isolation, and spectral analysis to derive two composite indices.
- Mapped physiological time-series signal onto a 2-axis robotic mechanism and control joint rotation, link angle and LED light intensity, encoding cognition as a dynamic spatial and luminous signal .
- Fabricated the 2-axis robotic plotter with Arduino Uno with real-time control logic; integrated neural control, servo actuation, and programmable lighting into a unified hardware system in response to human emotions.

AI-Generated Affective Scent

CAMBRIDGE, 2025

Affective Computing · Multimodal AI · Olfactory Design

- **Role:** AI Design · Multimodal Reasoning · Real-Time Sensing & Inference · Affective System Design
- Investigated olfaction as an effective intervention medium for simulated driving scenarios.
- proposed a system in which AI infers emotional and cognitive state in real time and generates corresponding scent prescriptions sequence to modulate driver affect.
- Designed multi-modal reasoning pipeline with Language Modelling (VLM) and LLM-inspired scent generation.
- Course project advised by Prof. Rosalind Picard and Prof. Paul Liang.

SKILLS

- **Technical:** C, Python, SQL, HTML/CSS, JavaScript, Arduino IDE, ESP32, MATLAB, OpenCap, OpenSim
- **Design:** Blender, Rhino, Fusion, TouchDesigner, Unreal Engine, Gaea, Autodesk Maya, Figma, Processing
- **Other:** Motion Capture and Biomechanics, Physical Computing, Physiological Signal Processing (EEG, EDA HRV, SpO2), E-textile, Laser cutting, 3D printing, CNC machining, Casting