Terry Chern

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SKILLS

- **Clinical & Scientific Research:** Human Subjects Study Design, IRB Protocol Management, Ethics Compliance, Scientific Dissemination
- **Machine Learning & Data Science:** Python, PyTorch, Pandas, Time-Series Analysis, Signal Processing, Statistical Modeling
- **Engineering & Infrastructure:** Git, Linux Ubuntu, Jupyter, Conda, Pixi
- **Domain Expertise:** Wearable Sensor Integration, Cardiovascular Tracking, Digital/Mobile Health

PROFESSIONAL EXPERIENCE

Postdoctoral Research Fellow | Columbia University | New York, NY | Jul 2026 – Present

- Lead a novel research project using Generative Adversarial Networks (GANs) for synthetic physiological data generation, augmenting human subjects datasets to improve the robustness and scalability of predictive health models.
- Advise and mentor junior researchers on clinical study design and reproducible analytical workflows.

Doctoral Researcher | Columbia University | New York, NY | Aug 2020 – Jun 2026

- Managed the end-to-end lifecycle of human subjects research, including protocol development, IRB compliance, and the collection of complex multimodal biobehavioral datasets.
- Synchronized, analyzed, and interpreted wearable and mobile health-driven physiological datasets, applying rigorous statistical and computational methods to improve blood pressure prediction.
- Built highly reproducible analytical workflows using Python, PyTorch, and Hydra to process noisy, real-world time-series data to mitigate effects of complex biomechanical confounders.
- Produced first-author publications on wearable sensor applications in high-impact peer-reviewed journals, with a focus on machine learning algorithms and user experience.

Columbia Tech Ventures (CTV) Fellow | Columbia University | New York, NY | Oct 2022 – Feb 2026

- Evaluated early-stage university clinical and digital health technologies to determine patentability, market viability, and readiness for human subjects applications.
- Synthesized complex scientific data into clear, decision-ready insights and technology briefs for external industry partners and stakeholders.

EDUCATION

Ph.D. in Biomedical Engineering | Columbia University | Presidential Fellowship | Class of 2026
B.S. in Electrical Engineering and Computer Science (EECS) and Mechanical Engineering
University of California, Berkeley | Class of 2020

SELECTED PUBLICATIONS

- **T.L. Chern**, et al. Manuscript under review at a peer-reviewed journal (2026). Led clinical study design and developed a deep learning pipeline to improve blood-pressure measurement accuracy from a wearable device in free-moving, ambulatory settings (N = 75 human subjects).
- **T.L. Chern**, et al. Manuscript under review at a peer-reviewed journal (2026). Designed and led a randomized controlled trial evaluating a mobile health app's effect on COVID-19 self-testing behavior, closing the gap between user intent and real-world testing action (N = 100 participants).
- C.G. Wright, **T.L. Chern**, et al. "Pre-Exposure Prophylaxis Adherence and HIV Self-Testing App Among Women in the South Bronx: 12-Month Usability, Acceptability, and Feasibility Study." *JMIR Formative Research* (2026). Analyzed 12-month usability data to assess the feasibility of a digital health app for PrEP adherence among women (N = 40 participants).
- D.A.M. Colburn, **T.L. Chern**, et al. "A method for blood pressure hydrostatic pressure correction using wearable inertial sensors and deep learning." *npj Biosensing* (2025). Managed manuscript preparation and strategic framing, synthesizing complex findings for peer-reviewed publication.
- V. Behnam, **T.L. Chern**, et al. "Assessment of cardiovascular risk from ambulatory blood pressure measurements enabled by deep learning." *npj Biosensing* (2025). Led manuscript reframing and scientific data visualization to communicate a novel method for cardiovascular risk prediction.