

Kieran Kim

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PROFESSIONAL EXPERIENCE

Pentax Medical, C2 Therapeutics

AUG 2023 – Present

R&D Mechanical Engineer

- Progressed 360° cryoballoon ablation catheter from phase 1 to phase 3; contributed diffuser designing, CAD modeling, material analysis, FMEA, Catheter assembly, and V&V testing.
- Assisted animal study feasibility testing, dosimetry study, and tissue histology analysis.
- Designed and built a radial temperature profile test bed to collect Catheter cryoablation effectiveness data via surface and sub-surface temperature readings.
- Written and carried out TMV and V&V protocols for 180° cryoballoon ablation catheter IFU dosimetry update for FDA 510K submission.
- Aided in cross-functional manufacturing projects like production TOL building and document restructuring, NCR investigations, and CAPA resolution.
- Trained & managed intern engineers on familiarizing with company products, testing catheters, independently completing complaints, and iterating fixture designs.
- Led product complaint investigations and designed product changes in response to MDR alerts.

Hematometer Device

SEP 2022 – JUN 2023

Project Member, CAD Designer

- Developed and tested non-invasive medical device for detecting anterior neck hematomas (ANH) for post thyroidectomy patients.
- Device allows for a real-time quantitative analysis that removes the need for overnight patient stay and is an early alert system quicker than current doctor-assisted visual observations.
- Conceived from surgeon user needs; built into a tangible device that completed preliminary V&V, FMEA, and IRB.
- Created with biocompatible materials and used capacitive flex sensors to detect patient skin expansion, audio sensors for breathing and speech changes, and thermocouples for minute surface temperature differences.

Neuroprosthetics Lab

APR 2022 – OCT 2022

Research Assistant

- Constructed Python-based neural simulator for BCI speech modulation that processed human speech into neural data via signal processing and select filters.
- Incorporated project into Lab pipeline for validating other code block processes.

EDUCATION

University of California, Davis

SEP 2019 – JUN 2023

Bachelor of Science in Biomedical Engineering | Biomechanics emphasis

Awards & Clubs: Most Distinguished Medical Device (Capstone) | Brain & Behavior Research Club

TECHNICAL SKILLS

CAD (Solidworks, Onshape) | 3D Printing (FDM, SLA) | Micro Tig welding | Soldering | Manual Machining (Lathe, Mill)
Software (Python, MatLab, Arduino, Lua) | PLM (Agile, MasterControl) | Documentation (MPIs, NCRs, Complaints)