

Kenneth Chang

✉ kenneth.chang94@gmail.com
🌐 <https://scryvener.github.io/>
www.linkedin.com/in/kennethcchang

Experienced product development engineer seeking to build healthier communities

Experience

Nova Pneuma Incorporated

Product and Process Industrialization Engineer, 02/2026 - Present

- Technical Subject Matter Expert for commercial scale up and capacity expansion activities, such as automated assembly lines and high volume tooling. Responsible for evaluating technical readiness, developing process improvement initiatives and troubleshooting supplier challenges.
- Project manage critical initiatives, such as multi-cavity injection molds, new equipment qualifications, and procuring tooling at suppliers.
- Lead various engineering studies as part of ongoing manufacturing support and sustaining, such as qualifying like-for-like replacements, equipment IOPQ, etc.

Alexza Pharmaceuticals

Mechanical Engineer IV, 02/2025 - 02/2026

Mechanical Engineer III, 02/2023 - 02/2025

- Lead design, prototyping, and testing of core aerosol drug delivery system components. Leverage Computational Fluid Dynamics, 3D printing, and bench testing to rapidly iterate design features. Manage testing and evaluation of designs under development, including functional testing, SW/FW debugging, and aerodynamics optimization. Closely collaborate with Pharmaceutical Development group to evaluate new drug candidates and incorporate diverse drug needs into component designs.
- Designed, maintained, and executed tests with in-house fixtures and equipment, such as for thermal imaging and use life simulation testing. Prepared test protocols, reports, and engineering memos. Perform data analysis to drive design decisions and improvements to manufacturing process. Prepared engineering documentation including component drawings and specification documents.
- Worked closely with other development groups, manufacturing, and external partners to identify requirements and define system, electrical and mechanical specifications.

Prodeon Medical/MedeonBio

Research & Development Engineer, 07/2016 - 02/2023

- Drove design and development for 3 generations of Nitinol implants, catheter delivery systems, and retrieval accessories such as an auto-locking grasper and access sheaths. Key contributor throughout product development life cycle, from early concept prototyping, design iteration, test method development, animal and cadaver studies, and clinical trials.
- Closely collaborated with cross-functional team and suppliers to achieve accelerated development and iteration timelines. Successfully implemented design improvements in time for use in clinical trials, such as expanded implant sizing, broader hospital equipment compatibility, increased sheath flexibility, and controlled delivery features.
- R & D Lead for Design Verification, post-retrieval data analysis, cadaver, and characterization studies. Physician training and R&D lead for animal and First in Human clinical studies. Authored component and product specifications, FMEAs, and process instructions to support design reviews and regulatory submissions. Responsible for authoring Test Protocols and Reports, including for Design Verification, Implant Testing, and Adverse Event investigations
- Collaborated with Manufacturing and Operations to support ongoing builds and resolve process observations. Successfully closed critical Non-Conformance Reports and resolved problems in manufacturing, design, and at the suppliers.
- Managed and coached interns over the summer period. Interns successfully completed multiple high-impact projects such as training models and test fixtures.

SAGE

Chief Technology Officer, 11/2021 - 05/2022

- Led technology related initiatives for e-sports start-up focused on community building through competitive tournaments. Company successfully organized 8+ events with monetary prize pools with a peak of 450+ participants, over 150k video views on YouTube, and 5k followers on Twitch.

Personal Projects

Porch Pumpkin

06/2026 - Present, Reactive Animatronic with Computer Vision

- Jack-o-Lantern decoration featuring more advanced motion tracking run from a Raspberry Pi and Arduino. Motion tracking to be done by computer vision, with NOIR camera and IR illuminator for low light operation. Motor control to feature improvements such as acceleration limiting for smoother tracking movements. Basic behavior tree planned to allow for added intelligence, such as multi-object handling.

Haunted Snowman

12/2025 - 07/2026, Reactive Animatronic

- Arduino controlled snowman animatronic leveraging ToF sensors to create a motion tracking effect and reactive wave action that would trigger depending on detected movement. Wrote code to process sensor data and translate it into motor commands. Designed and built both internals and externals, such as a PVC tubing structural frame and 3D printed mountings for electronics, motors, sensors.

Whispers

05/2025 - 06/2025, Interactive Art Installation

- Technical and fabrication lead for a complex, outdoor, multi-station art installation. Exhibit utilized a network of Raspberry Pi's to control interactivity at each station, featuring audio playback, recording, voice modulation, and mixing to create a crowd chorus effect. Responsible for setting up power, LED animations, button interaction, and wireless network communication between the stations.

Skills

Software	Solidworks, Python, MATLAB, C for embedded systems
Analysis	CFD with Solidworks Flow Simulation, FEA with Solidworks Simulation, JMP and Minitab
Prototyping	3D Printing, Injection Molding, Soldering, Laser Cutting, DFM
Testing	Design Cycle Testing, Packaging and Transit, Material (Corrosion, MRI, and Biocompatibility), Imaging (SEM, EDX, Auger, FLIR), Accelerated Aging, Ergonomics and User Testing
Design	User Requirements and Product Specifications, Risk Management (Hazard Analysis, dFMEA, uFMEA, pFMEA), Design Reviews, Verification and Validation, Test Protocols and Reports
Controls	
Languages	Mandarin Chinese

Patents

- 11497637B2: Implantable devices and methods to treat benign prostate hyperplasia (BPH) and associated lower urinary tract symptoms (luts)
- 11812930B2: Devices for the treatment of benign prostatic hyperplasia and related lower urinary tract symptoms
- 12383288B2: Self-actuating grasping device
- US20210022594A1 (Pending): Delivery systems and devices for the treatment of benign prostatic hyperplasia and related lower urinary tract symptoms
- EP4727627A1 (Pending): Aerosol-generating device with improved airflow

Education

2012–2016 **B.S. Biomedical Engineering**, *University of California, Davis*