

# HyungCheol Kim

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## EDUCATION

### University of California, Irvine

B.S. Biomedical Engineering with Specialization in Photonics

Irvine, CA

June 2025

## EXPERIENCE

### Learning Assistant | University of California, Irvine

March 2025 – Present

- Instructed and guided over **40** students in active teaching Finite Element Analysis using ANSYS through guided problem solving.
- Collaborated with course instructor to design and refine ANSYS tutorials to enhance student comprehension and engagement.

### Undergraduate Researcher | Dr. King CERVOS Lab

March 2024 – Present

- Utilized **silicone molding** to create wax core ellipses, enabling inflatable pessary design for improved fit.
- Designed and manufactured reusable silicone molds, streamlining wax core production, and improving fabrication efficiency.

### Process Engineering Intern | Applied Medical

June 2024 – September 2024

- Optimized **Manufacturing Instructions (MI)** and **SOPs** to improve process efficiency and reduce scrap.
- Applied **GD&T** to create Laser Welding Fixture SolidWorks drawings, ensuring manufacturability of prototypes.
- Conducted root cause analysis on top trending scrap issues, identifying process inefficiencies and implementing corrective actions, saving **\$26,000** annually.
- Designed and presented tooling solutions to team leadership, enhancing manufacturing yields and production consistency.

### Undergraduate Researcher | Dr. Andrew Browne Eye Fixation Device Lab

March 2024 – June 2024

- Analyzed design limitations of the Eye Fixation Device, reducing LCD display vibrations by optimizing the stepper movement.
- Designed a new electronics housing unit reducing material usage by **40%** with a mirror-lens system.
- Integrated Raspberry Pi, LCD display, lens filter, and stepper motor into a compact housing, improving the Eye Fixation Device functionality.

### Learning Assistant | University of California, Irvine

March 2024 – June 2024

- Instructed and guided over **100** students in active teaching of SolidWorks fundamentals, enhancing CAD proficiency.
- Facilitated discussion of **SolidWorks** concepts during lecture, reinforcing design principles and problem-solving techniques.
- Collaborated with professor and teaching assistant to enhance learning experiences in student group projects.

## PROJECTS

### REACH Dean's Choice Award | Hardware Lead

September 2024 – Present

- Designed and 3D printed custom fixture housing a Raspberry Pi to control a Functional Electrical Stimulation (FES) device for muscle rehabilitation.
- Led iterative design and testing, optimizing FES device control, improving device performance.
- Collaborated with multidisciplinary team to develop devices, enhancing rehabilitation outcomes through real-time EMG feedback.

### Guidance Glasses | Hardware Lead

March 2023 – June 2023

- Designed smart glasses to aid the visually impaired in navigating urban environments by designing **five iterations** of smart glasses frame to fit and balance haptic motor, ultrasonic sensor, camera, and microphone.
- Optimized 3D printing processes, reducing print time by **50%** while maintaining structural integrity.
- Applied proper **GD&T** in **SolidWorks**, creating customized drawing templates for each component assembly.
- Collaborated with **five interdisciplinary** engineers, facilitating effective communication and iterative design improvements for seamless project development.

## LEADERSHIP

### Theta Tau Professional Engineering Organization | Director of Brotherhood

March 2023 – Present

- Organized fundraising events and professional social events for the organization of **50+** active members.
- Managed budget and tracked financial records using Microsoft Excel, overseeing a combined revenue of **\$7000**.

### Republic of Korea Marine Corps | Sergeant

Nov 2020 – May 2022

- Led and trained **30 recruits** per month in CBRN (Chemical, Biological, Radiological, and Nuclear) fundamentals, demonstrating specialized expertise and leadership.
- Collaborated with the **USMC** in joint military exercises, including **Combined Command Post Training (CCPT)**.
- Awarded recognition for **Teamwork, Leadership, and Honor** by the Commissioner of Military Manpower of South Korea.

## SKILLS

SolidWorks, MATLAB, LabView, Finite Element Analysis, 3D printing, FMEA, P&PC (Production & Process Control), Process Validation (IQ,OQ,PQ), Root Cause Analysis, Silicone Molding, Injection Molding, QMS (Quality Management Systems), Microsoft Project, Microsoft Office, Circuits, Laser Cutting, Welding, Soldering, Woodworking, Arduino, English, Korean, Turkish