

Jeffrey (Changil) Moon

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EXPERIENCE

YALE VISION LAB | RESEARCHER

Jun 2024 – Present | New Haven, CT

- Researched depth estimation using multimodal sensor fusion (particularly radar and language) for autonomous driving, under Prof. Alex Wong

PENN ELECTRIC RACING | SOFTWARE ENGINEER

Sep 2025 - Present | Philadelphia, PA

- Worked on driverless implementation using camera and LiDAR sensors

TRUDIARY INC. | SOFTWARE INTERN

Jul 2023 – Aug 2023 | Atlanta, GA

- Built backend APIs and frontend dashboards using the MERN stack

PROJECTS & RESEARCH

SCENE GRAPH-GUIDED OBJECT-CENTRIC MONOCULAR DEPTH

ESTIMATION REFINEMENT | Co-AUTHOR

Jun 2025 - Present

- Proposed using scene graphs and spatial embeddings to refine monocular depth outputs with object-specific corrections
- Submitting to ECCV 2026

RADAR-GUIDED POLYNOMIAL FITTING FOR METRIC DEPTH

ESTIMATION | Co-AUTHOR

Jul 2024 - Present

- Introduced a fundamental insight of using polynomial coefficients predicted from a learned multimodal representation to enable non-uniform corrections on monocular depth estimation outputs
- Submitted to CVPR 2026

OPTIMIZED TRANSLATOR MODEL FOR JEJU DIALECT USING LANGUAGE-SPECIFIC CHARACTERISTICS | PRIMARY INVESTIGATOR

Jul 2022 - present

- Built a pipeline to identify dialectal words in Jejueo and applied a confidence-based mask into a Transformer for hybrid translation.
- Engineered jamo-level embeddings to better capture morphological structures unique to the Korean language.

VISIOMED: SMART VOICE-GUIDED MEDICINE STORAGE FOR THE VISUALLY IMPAIRED AND ELDERLY | PRIMARY INVESTIGATOR

Dec 2023 – Oct 2024

- Created a smart storage box with voice assistance and hand-detection for elderly and visually impaired patients.
- Deployed companion web and Android apps with Java, Tomcat, and OracleDB for dosage tracking.

CONSTRUCTION OF A LOW-COST, ACCURATE LIQUID HANDLING DEVICE WITH 3D PRINTING FOR PCR | PRIMARY INVESTIGATOR

Jun 2022 - May 2024

- Designed and fabricated a pipetting device for PCR with \$200 in materials, achieving a percent error of 4.8%
- Recognized with CSEF Jon Chapitis Spirit of Innovation Award and Next Step Inventors Prize

EDUCATION

CHOATE ROSEMARY HALL

Jun 2025 | Wallingford, CT

Dean's List (All Semesters)

GPA : 4.03/4.00 | 4.40 (weighted)

UNIVERSITY OF PENNSYLVANIA

Expected Jun 2029 | Philadelphia, PA

SKILLS

PROGRAMMING

C/C++ • Python • Java • Rust • JavaScript • SQL • HTML/CSS

TECHNICAL SKILLS

Git/Github • AWS • LaTeX • Linux • RTOS • ROS • Fusion360/Solidworks • Altium • MATLAB

LANGUAGE

English • Korean • Chinese (Limited Working Proficiency)

HONORS & AWARDS

- Cum Laude Society
- USACO Platinum
- CSEF Jon Chapitis Spirit of Innovation Award
- CSEF Next Step Inventors
- IROC Korea Individual AI Soccer Competition - Gold/1st place
- IROC Korea Team Creative Problem Solving- Gold/1st place

LINKS

Github:// [Jeffrey-Moon](#)

LinkedIn:// [Changil Jeffrey Moon](#)