Jeffrey (Changil) Moon

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EDUCATION

University of Pennsylvania — Philadelphia, PA
Bachelor of Arts, Physics & Computer Science — Expected Jun 2029 | GPA: 3.86/4.00

EXPERIENCE

Yale Vision Lab — New Haven, CT
Researcher — Jun 2024 – Present
- Researched depth estimation using multimodal sensor fusion (particularly radar and language) for autonomous driving, under Prof. Alex Wong

University of Pennsylvania — Philadelphia, PA
Teaching Assistant — May 2026 - Present
- Instructed weekly recitations, conducted 1-on-1 oral assessments, and collaborated on curriculum development to support students in Introduction to Computer Systems (CIS 2400).

Penn Electric Racing — Philadelphia, PA
Software Engineer — Sep 2025 - Present
- Led implementation and design of autonomous system for the FSAE Driverless division, mainly focusing on perception and localization.
- Implemented an MCP server with RAG implementation to inject context of custom data analysis library and CAN variables. Designed and developed a data analysis chatbot capable of generating, executing, and iteratively refining analysis scripts through the MCP server.

TruDiary Inc. — Atlanta, GA
Software Intern — Jul 2023 - Aug 2023
- Built backend APIs and frontend dashboards for the chat service of an web application prototype using the MERN stack.

PROJECTS & RESEARCH

Radar-Guided Polynomial Fitting for Metric Depth Estimation | CVPR 2026
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

Steering Monocular Depth Estimators with Objects-As-Tokens | CVPR 2027
Co-Author — Jun 2025 - Present
- Introduced the idea of injecting objects as tokens and steering the latent embedding of scaleless monocular depth estimation models to transfer to metric monocular depth estimation.

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 to a Transformer for hybrid translation.
- Engineered jamo-level embeddings to better capture morphological structures unique to the Korean language.

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

SKILLS

Programming: C/C++, Python, Java, Rust, JavaScript, SQL, HTML/CSS
Tools & Frameworks: Git, OpenCV, PyTorch, LaTeX, Linux, RTOS, ROS, Fusion360/Solidworks, Altium, MATLAB, Gazebo, STM32, AWS
Languages: English, Korean, Chinese (Limited Working Proficiency)

HONORS & AWARDS

USACO Platinum • Winner, NexHacks Hackathon • Cum Laude Society • 4× AIME Qualifier • CSEF Jon Chapitis Spirit of Innovation Award • CSEF Next Step Inventors • Gold/1st place, IROC Korea Individual AI Soccer Competition • Gold/1st place, IROC Korea Team Creative Problem Solving