Jin Rhee / 이진

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Education

University of Oxford, St John's College Oct 2022 - (Jun 2026)
MEng in Engineering Science

- First Class (Prelims: 78.22, Part A: 77.11, Part B: 77.73), Kwanjeong Educational Foundation Scholarship
- Courses: Robotics and Machine Vision, Deep Learning, Robust and Distrbuted Control, Optimal and Learning-based Control, Probability, Systems and Perturbation Methods, Mathematical Techniques

Korean Minjok Leadership Academy Mar 2019 - Jun 2022

- Courses: Linear Algebra, Differential Equations, Vector Calculus, Physics, Applied Mathematics Project
- Ten AP exams with score of 5; KMLA Mock Trial, Korean Archery (National Team & Indiv. Gold)

Experience

Dynamic Robot Systems Group @ Oxford Robotics Institute Jul 2025 - Sep 2025
Research Intern

- Created visual-inertial bundle adjustment using OpenVINS feature tracks and GTSAM with data collected from Meta Aria Glasses; performed IMU-Camera calibration with Kalibr
- Advised by Prof. Maurice Fallon & Prof. Frank Dellaert and funded via Oxford EUROP scheme

Urban Robotics Lab @ KAIST Jul 2024 - Oct 2024
Visiting Student Researcher

- Studied and compared results of LiDAR odometry methods (FAST-LIO, LIO-SAM, LeGo-LOAM)
- Implemented motion blur filter in TSDF integration pipeline to improve quality of dense colored mesh generation from LiDAR-camera data
- Contributed to groundtruth labeling of over 2800 frames in point-wise dynamic object segmentation dataset

Bear Robotics, Inc. Jun 2023 - Sep 2023
Mechatronics Engineer Intern

- Implemented code for simultaneous control of stepper motors on prototype food-bin gantry system; assessed mechanical repeatability and optimized trajectory for speed and stability
- Experimentally determined static tip-over condition of main robot model, prototyped clamps to isolate effect of rocker-bogie mechanism in robot base

Lightricity Ltd. Mar 2024 - Mar 2024
Intern

- Implemented light sensitive sleep-time adjustment for demo to showcase ultra-low power PV cell with EPD display and lux sensor; developed in C on Epson MCU

Projects

Monocular Visual Mapping with Transformer-based Registration Oct 2025 - current
Fourth Year Project

- Aim to augment feed-forward 3D reconstruction models with physical sensors for monocular visual mapping

QronkOxford Oct 2022 - current
Oxford Robotics and Additive Manufacturing Society

- Led team of undergraduates in creating a low-cost 3D printed quadruped robot; managed LeRobot workshop sessions in collaboration with OxAI
- Designed motor control, power electronics, leg-linkage; led tutorial sessions on Ubuntu, Git, ROS, etc.

Software and System Design of a Multi-agent Aerial System Oct 2024 - May 2025
Third Year Project

- Designed software and system of multi-drone swarm to assist search and rescue operations
- Tested multi-drone communication system in simulation; culminated in report and presentation

Other

OxAI Hardware Lab Nov 2025 - current
Organizer

- Leading hardware sessions in collaboration with OxAI for students to build and test LeRobot arms; final goal to learn and deploy policies for demonstration tasks
- Received 105 sign-ups in five days from undergraduate and postgraduate applications for twelve spots

Optimization for Robotics Summer School Jul 2025
Participant

- Attended lectures, practicals, and plenary talks on optimization, optimal control, reinforcement learning, and state estimation; received participant fee waiver.
- IEEE Robotics & Automation Magazine article

Additional Skills and Info

Code: C, C++, Python, MATLAB

Tools: LaTeX, ROS, Git, CMake, Linux, CAD (Solidworks, Autodesk Fusion)

Languages: Korean (Fluent), English (Fluent)