Michael Jae-Yoon Chung

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SUMMARY

I'm a robotics software generalist. I work between robotics, devops, webdev, and product to find and address high-impact problems, vertically. That said, I'm currently interested in robotics application, simulation, and devtooling-related problems.

EXPERIENCE

HIL Engineer 2024-Present
Motional Seattle, WA (Remote)

- Built a new application layer for HIL infrastructure, reducing average test duration by 50%.
- Improved reliability to integrate HIL into mainline CI/CD, enabling gating using resimulation latencies.
- Delivered an observability data pipeline, delivering insights for leadership and accelerating debugging.

Senior Robotics Engineer 2021 – 2023
Intrinsic/Vicarious (Vicarious was acquired by Intrinsic in May, 2022) Seattle, WA (Remote)

- Worked on IDE-based robot skill development and simulation-aided testing tools.
- Led the effort to adopt service-oriented architecture to deployed robot applications and then collaborated to deliver human-machine interface integration, containerization, and application management command-line tools.
- Collaborated with Grasping, Motion Planning and Control teams to design, plan, and adopt service-oriented architecture on deployed components to improve application initialization/execution speed, robustness, and isolation.

Robotics Application Engineer 2016 – 2018
Savioke San Jose, CA

- Contributed to developing and maintaining user-facing on-board and desktop application backends and support infrastructure such as configuration and notification management systems that were deployed to 50+ mobile robots.
- Deployed a non-roboticist-friendly robot programming system, enabling new product research collaborations with 5+ beta customers including an airport in Southeast Asia, resulted in 2 beta applications and 2 academic publications.

Research Assistant 2018 – 2020 & 2011 – 2015
University of Washington Seattle, WA

- Designed, built, and evaluated robot programming systems for non-roboticist developers with inspirations drawn from programming languages research, web development, and product research, resulting in 7+ academic publications.
- Built, deployed, and maintained 3+ end-to-end mobile robot and robot manipulator applications reusing existing perception, planning and control, and UI components; evaluated the applications by conducting user studies.
- Recruited, trained, and mentored 14 undergraduate students and co-authored 5+ academic papers with 7 of them; 2 students started their own research projects which resulted in academic publications.

EDUCATION

Ph.D. Computer Science & Engineering, University of Washington (2020)
Master of Science Computer Science & Engineering, University of Washington (2014)
Bachelor of Science Computer Science, University of Washington (2010)

SKILLS

Knolwedge : Robotics Software Architecture, Distributed Systems, Simulation Tools, DevOps, Developer Tooling, Web Development, Requirement Elicitation, Project Planning, User Research & Study
Tools : PL (e.g., Python, C++, JavaScript, Go), Robotics Infra (e.g., Linux, ROS) and Arch (e.g., SOA, FSM), DevOps (e.g., git, Bazel, Docker, Prometheus/Grafana, AWS), WebDev (e.g., Node.js)
Langauages : English (fluent), Korean (native)