Bereket Faltamo

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Education

Northeastern University — Boston, MA
Master of Science in Computer Science — *Sep 2022 – Dec 2024(Expected)*
- GPA: 4.0/4.0

Korea Advanced Institute of Science and Technology (KAIST) — Daejeon, Korea
Bachelor of Science in Mechanical/Electrical Engineering(Double Major) — *Feb 2017 – Dec 2021*

Relevant Coursework: Algorithms, Object-Oriented Design(Java), Operating Systems(C), Programming Structures, Data Structures, Robotics Engineering, Machine Learning, Mobile Robotics, Computer Vision

Experience

Summer Research Fellow — July 2023 – Present
Massachusetts Institute of Technology (MIT) — *Boston, MA*
- Working on projects in the areas of geometry processing, computer vision/graphics, etc.

Graduate Teaching Assistant | *CS 5002: Discrete and Data Structures* — Dec 2022 – Present
Northeastern University Khoury College of Computer Sciences — *Boston, MA*
- Held office hours for 80+ students to review course content and problem sets
- Graded problem sets & exams and provided the course instructore feeback on students' performance

Robotics Software Engineer — Apr 2022 – Aug 2022
DOGU Co., Ltd — *Seoul, Korea*
- Designed and implemented an autonomous docking algorithm for automatic charging of service robots using ROS move_base stack and a V-shaped station

Software Engineering Intern — July 2021 – Aug 2021
AKA AI — *Seoul, Korea*
- Integrated a SLAM algorithm to a UGV to autonomously navigate in farmland using RGB camera and 3D LiDAR
- Designed and trained real-time classifier for ripeness of tree fruits using YOLO and Darknet frameworks

Projects

Tux Shell | *C, Perl, Unix, Git* — Feb 2023 – Mar 2023
- Designed and implemented Tux shell, a simplistic command-line interface that parses and executes user input commands.
- Utilized system calls to execute shell commands, providing users with access to basic file management and process control functionality
- Thoroughly tested the implementation using Perl script

Autonomous Mobile Robot | *C++, OpenCV, ROS, V-REP* — Mar 2021 – June 2021
- Developed a perception pipeline for a mobile robot, incorporating an RGB-D camera and LiDAR sensor to enable mapping and object recognition.
- Co-ordinated a team of 6 students to design and build an autonomous mobile robotic system

Technical Skills

Languages: Java, Python, C/C++, JavaScript, HTML/CSS, MATLAB
Frameworks: Bootstrap, jQuery, React, Node.js, MongoDB, JUnit, ROS
Developer Tools: Git, VS Code, PyCharm, IntelliJ
Libraries: OpenCV, PyTorch, NumPy, Matplotlib