Bereket Faltamo

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EDUCATION

Northeastern University

Boston, MA

Master of Science in Computer Science(Co-op), GPA: 4.0

May 2025 (Expected)

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: Object-Oriented Design, Operating Systems, Programming Structures, Data Structures & Algorithms, Robotics Engineering, Machine Learning, Mobile Robotics, Computer Vision, Dynamics

TECHNICAL SKILLS

Languages: Java, Python, C/C++, JavaScript, HTML/CSS, MATLAB

Frameworks: Bootstrap, jQuery, React, Node.js, Express, MongoDB, REST API, JUnit, ROS

Developer Tools: Git, VS Code, PyCharm, IntelliJ **Libraries**: OpenCV, PyTorch, NumPy, Matplotlib

EXPERIENCE

Teaching Assistant | CS 5002: Discrete and Data Structures

Dec 2022 – Present

Boston, MA

Northeastern University Khoury College of Computer Sciences

- Held office hours for 80+ students to review course content and problem sets
- Conducted one-on-one tutoring sessions for students repeating the class, resulting in a 100% pass rate
- Graded problem sets & exams and provided the course instructor feedback on students' performance

Summer Research Fellow

July 2023 - Aug 2023

Massachusetts Institute of Technology (MIT)

Boston, MA

- Evaluated various random meshing strategies and assessed their effectiveness using the Heat Method
- Developed a C++ tool using libigl library to automate 3D object segmentation into developable surfaces
- Implemented Iterative Closest Point algorithm using Hausdorff distance for shape correspondence

Robotics Software Engineer

Apr 2022 – Aug 2022

DOGU Co., Ltd

Seoul, Korea

- Designed and implemented docking algorithm for autonomous service robots using ROS move_base stack and a V-shaped charging station, reducing docking time by 20%
- Integrated RTAB-Map SLAM algorithm to the robot's perception system using RGB-D camera

Projects

NU-foundit! | JavaScript, Bootstrap, React, Redux, Node.js, Express.js, MongoDB, Git

- Developed a lost and found web application in JavaScript for Northeastern University students
- Engineered a RESTful API with Node.js and Express, connecting to MongoDB to manage lost and found item records and user interactions securely
- Designed a user-friendly Single Page Application (SPA) using React and Redux, integrating Bootstrap for responsive and intuitive web pages

Tux Shell | C, Unix, Perl, Git

- Architected and implemented a 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

Shapes Album | Java, Swing, HTML/CSS, JUnit, Git

- Implemented a custom photo album using Model-View-Controller (MVC) architecture and OOP principles
- Designed user-friendly graphic and web viewers using Java Swing and HTML/CSS
- Ensured robust functionality via comprehensive JUnit testing