# Badraa Bat-Ulzii

| CONTACT | Undergraduate student | |
|---|---|---|
| | Computer Science and Engineering, UNIST | 50 UNIST-gil, Eonyang-eup |
| | *Email:* bbadraa99@unist.ac.kr | Ulsan 44919, Republic of Korea |

| EDUCATION | **Ulsan National Institute of Science and Technology (UNIST)** | Ulsan, Korea |
|---|---|---|
| | Undergraduate student in Computer Science | SEP. 2020 – Present |

| HONORS AND AWARDS | **Best Paper Bronze Medal** Brain to Society program (BTS) 2022 | 2022 |
|---|---|---|
| | **Full Tuition and Scholarship recipient - 4 years** UNIST | 2020 |
| | **Gap Year Internship Program** Gerhub | 2020 |
| | **Mongolian Young Scholar Award** Zorig Foundation | 2019 |
| | **Full tuition scholarship - 1 year** LeTourneau University, USA | 2019 |

**PROGRAMMING LANGUAGES**

**Python**, **C++**, **Java**
**JavaScript**, **HTML**, **CSS**,

**FRAMEWORKS AND LIBRARIES**

**React**, **Next.js**, **Spring Boot**, **Docker**, **jQuery**, **MySQL**
**MongoDB**, **Git**, **Maven**,

## PERSONAL PROJECTS

**Portfolio Website v.1** — Ulsan, South Korea
Personal — APR. 2024
- Crafted my portfolio website v.1 using Next.js, Tailwind CSS, and TypeScript for a sleek, responsive, and type-safe experience.
- Engineered a modern and clean user interface, ensuring seamless navigation and dynamic content presentation.

**Gather** — Ulsan, South Korea
Co-founder — FEB. 2023 – June. 2023
- Initiated a web application designed for finding study or hangout "buddies" to promote socializing on campus at UNIST
- Implemented the front-end using React and backend using Spring Boot framework
- Developed a database using MongoDB compass and tested the CRUD operations and enabled the search algorithm

## INTERNSHIP EXPERIENCE

**Perception Learning Lab, UNIST** — Ulsan, South Korea
Android Studio Developer — MAR. 2024 - Present
- Extended backend features using Kotlin, seamlessly integrating them into the existing Eye Training application
- Enhanced database functionality by integrating MongoDB to support new features, ensuring efficient data management
- Conducted thorough testing and debugging of the new features to ensure compatibility and stability across various devices

**Rubick AI** — Ulaanbaatar, Mongolia
Software Engineering Intern — JAN. - FEB. 2024
- Developed a landing page from scratch using Next.js, Tailwind CSS, and Typescript for the CarCare project (https://carcare.mn/)
- Incorporated fully responsive design for small to extra large devices
- Integrated interactive features and optimized the user experience using React Framer Motion

**Digital Solutions** — Ulaanbaatar, Mongolia
Software Engineering Intern — JAN. - FEB. 2023
- Collaborated designing the "Guyuk" project website using HTML and CSS (https://guyuk.mn/)
- Performed Metaverse market analysis and helped finding the niche that is suitable in Mongolia

| | | |
|---|---|---|
| RESEARCH EXPERIENCE | **Tactile Interaction (TACT) Lab, UNIST** | Ulsan, Korea |

RESEARCH
EXPERIENCE

**Tactile Interaction (TACT) Lab, UNIST**　　　　　　　　　　　　　Ulsan, Korea
Research Intern
Mentors: Prof. Jaeyeon Lee (UNIST), Prof. Seongkook Heo (UVA)　　　Mar. - Nov. 2023
- Co-created dynamic haptic system
- Developed experimental software and virtual context using Python
- Designed qualitative and quantitative haptic research experiments on user perception

**Brain To Society (BTS) program, UNIST**　　　　　　　　　　　　Ulsan, Korea
AI Research Developer　　　　　　　　　　　　　　　　　　　　Mar. – Dec. 2022
Mentors: Prof. Jeongseob Kim (UNIST)
- Researched Housing Price Prediction using Machine Learning in Ulsan, Korea
- Constructed and Evaluated 11 Machine Learning Regression models including XGBoost, Catboost, Light GBM, etc
- Interpreted the hidden layers of the model using Shapley Additive explanations method

LEADERSHIP AND
ACTIVITIES

**UNIST International Student Organization (UISO)**　　　　　　　　Ulsan, Korea
Vice President　　　　　　　　　　　　　　　　　　　　　Apr. 2022 – Mar. 2023
- Led a team of 12 students to organize over 15 events and activities for over 200 international students
- Facilitated clear communication with stakeholders, including the Center of International Affairs (CIA), international students, and other student organizations on campus
- Fostered a welcoming and inclusive community for international students at UNIST

**MarbleUs Environmental Club**　　　　　　　　　　　　　　　　Ulsan, Korea
Member　　　　　　　　　　　　　　　　　　　　　　　Sep. 2021 – Mar. 2022
- Promoted environmentally friendly living through YouTube videos (@marbleus6456)
- Participated in mothly plogging, a combination of jogging and picking up litter
- Placed designated space for ice-pack waste at campus for recycling