

Bich Ngoc (Rubi) Doan

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Education

EPFL

M.S. in Digital Humanities

09/2024 – present
Lausanne, Switzerland

Relevant Courses: *Applied Data Analysis, Introduction to Natural Language Processing, Modern Natural Language Processing, Computational Social Media.*

KAIST

B.S. in Computer Science and Business-Technology Management

08/2019 – 08/2024
Daejeon, South Korea

Relevant Courses: *Introduction to Social Computing, Human-AI Interaction, Machine Learning, Computer Vision, Operating System, Computer Organization.*

University of Twente

Exchange in Creative Technology

02/2023 – 07/2023
Enschede, Netherlands

Relevant Courses: *Data-Driven Application, Data Visualization, Hybrid Worlds Project*

Research Experience

Collaborative Social Technologies Lab @KAIST

09/2023 – 09/2024

Project: Developing Content Moderation Tool for Integrating Restorative Justice into Online Spaces.

- Built a fully functional Discord bot that facilitates communication among stakeholders (victim, offender, moderator) when harm occurs, deriving from restorative justice principles.
- Employed the bot in active Discord communities, supported participants within the experiment period, and carried out exit interviews to extract insights into design implications for future restorative justice tools.
- Published the work as a long-form paper appeared in CHI 2025.
- Extended the study to investigate appeal system in community moderation and multi-level governance. Work accepted to CSCW 2025.

Interactive Computing Lab @KAIST

06/2022 – 08/2022

Project: Pro-active Smart Speaker System

- Integrated Pose Estimation into the system's data collection module. Trained and deployed the model using Google API, ensuring seamless incorporation into pre-existing legacy codebases.
- Conducted in-depth research into potential applications of the model within the existing system.

Collaborative Distributed Systems & Networks Lab @KAIST

01/2022 – 06/2022

Project: OctoFedS, a Federated Split Learning System for Object Detection at the Edge.

- Implemented primary parts of OctoFedS. Integrated YOLOv3 detection model distributedly and achieved nearly 92% mean average precision compared to the traditional training method with a centralized dataset.
- Carried out research, experiments, and analysis to highlight optimal performance points and explore potential use cases.
- Published a paper and presented the poster at KCC 2022.

Publications

Mapping Community Appeals Systems: Lessons for Community-led Moderation in Multi-Level Governance

2025

ACM CSCW

[link] Juhoon Lee, **Bich Ngoc Doan**, Jonghyun Jee, Joseph Seering

The Design Space for Online Restorative Justice Tools: A Case Study with ApoloBot

2025

ACM CHI

[link] Bich Ngoc Doan, Joseph Seering

OctoFedS: A Federated Split Learning System for Object Detection at the Edge

2022

Korea Computer Congress

[link] Bich Ngoc Doan, Thanh Tung Nguyen, Dongman Lee

Industry Experience

Rakuna

01/2020 – 06/2020

Full-stack Software Engineer

- Developed responsive web pages and features for HR-solution software used by more than 300 partner businesses.
- Collaborated with the Design team to create a Design Guideline that revamps UI design and integrates coding instructions.
- Migrated 40% of the legacy code base to a large-scale framework, creating reusable modules and components while updating documentation

Certificates

Become a User Experience Designer

LinkedIn Learning

Skills

Programming

Python, Javascript,
Ruby, C, HTML/CSS

Framework

PyTorch, Tensorflow,
Ruby on Rails, Material-
UI

Data Analysis

SciPy, NumPy, scikit-
learn, pandas

Projects

From Classroom to Screen

Fall 2024, Applied Data Analysis

[code] • [data story] A data-driven approach to understand the rise of Indian STEM content on Youtube

CodeXplorer

Fall 2023, Human-AI Interaction

[code] • [video] An AI-assisted system for comprehending and navigating large codebases

The Cost of (Fast) Fashion

Spring 2023, Hybrid Worlds Project

[document] • [video] A visualization and physicalization of the ecological impact of the (fast) fashion industry, including carbon emissions, working conditions, and textile waste. Received "Storytelling Award"

ClefClub

Fall 2021, Introduction to Social Computing

[code] • [prototype] • [video] A web/app platform for crowd-sourced music generation and collaboration. Received "Best Demo Award"

Grants and Scholarships

KAIST Undergraduate Scholarship

Full tuition fee and 16,800,000 KRW stipend (12,367 USD)

KAIST Undergraduate Research Program (URP) Spring 2024

Research grant of 5,000,000 KRW (3,681 USD)

KAlplus Undergraduate Scholarship

Need-based scholarship offered to international undergraduate students