

Eunwoo Won

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Human-Centered AI and Interactive Systems

EDUCATION

Iowa State University | Ames, Iowa

Bachelor of Arts in Computer Science | Minor in Applied Artificial Intelligence | GPA 3.56/4.00

Anticipated Graduation: May 2027

Aug 2023 –

May 2027

RESEARCH INTERESTS

Interactive AI systems that help people observe, understand, and respond to model failures; human-centered explainable AI and uncertainty communication; visual analytics and user-driven model steering; responsible AI evaluation for high-stakes decision support.

RESEARCH EXPERIENCE

AMFRAI Flood Decision Support Project

Undergraduate Researcher and Co-First Author | Iowa State University

Nov 2025 –

Apr 2026

- Built a React and ArcGIS JavaScript interface that delivers precomputed, physics-informed flood-depth and velocity predictions on standard web devices.
- Implemented single- and split-view comparisons across Ames ZIP codes, 100-, 200-, and 500-year return periods, and depth/velocity layers for rapid risk inspection.
- Separated offline prediction from web visualization to enable sub-second map-layer rendering and scenario switching; contributed to result interpretation and manuscript writing.
- Presented the work at an Iowa State University poster competition and at the 24th International Conference on Scientific Computing (CSC 2026).

AI-Native Networking Lab

Summer Research Intern | Advisor Prof. Sunghyun Choi | KAIST, Daejeon, South Korea

Jun 2026 –

Aug 2026

- Developed RANscope, a 10-screen React observability dashboard and data pipeline for AI-RAN edge-assisted autonomous-robot experiments spanning robot health, mobility, sensors, radio, infrastructure, metrics, and logs.
- Containerized the MQTT mobility gateway with Docker Compose and integrated MQTT/WebSocket telemetry with Prometheus metrics and Loki logs; added workload filtering, metric-log correlation, mobility-event detection, and explicit No data/Unknown states.
- Built Parquet/SQLite experiment archiving, synchronized replay, and CSV/JSON export; validated storage and recovery of a 24-hour synthetic run containing 17,280 time-series points.

TECHNICAL SKILLS

Programming: Python, Java, JavaScript, SQL

Web and Backend: React, Spring Boot, Node.js, Express, Vite, REST APIs, WebSocket

Data and Observability: Docker, Prometheus, Loki, MQTT, Parquet, SQLite, Sequelize, ArcGIS JavaScript API, QGIS

Machine Learning: scikit-learn, KNIME, TensorFlow coursework; classification, regression, feature engineering, TF-IDF, model evaluation

Data Analysis: Excel pivot tables and formulas; exploratory analysis of tabular datasets

PUBLICATIONS

Web Application for All-Time Maximum Flood Response Prediction by AI AMFRAI

2026

The 24th International Conference on Scientific Computing CSC 2026 | In press

D. Abuolliem*, E. Won*, I. Cintura, A. Arenas, and I. H. Cho. *Equal contribution.

SELECTED ACADEMIC AND TECHNICAL PROJECTS

Applied Machine Learning Projects

Spring 2026

AI201X | KNIME Analytics Platform and scikit-learn | Project

- Built an end-to-end Titanic classification workflow with median imputation, one-hot encoding, feature selection, and an 80/20 split; compared logistic regression, k-nearest neighbors, SVM, and random forest models.
- Engineered house-age, area, and bathroom features for house-price regression; benchmarked linear, random forest, gradient-boosted, and XGBoost models, with random forest reaching R-squared = 0.877.
- Built a scikit-learn telco-churn pipeline over 7,032 cleaned records, combining standardized numeric features, one-hot categorical variables, and TF-IDF feedback features for logistic regression.

OccAISO Campus Engagement Platform | Project

Fall 2025

Backend Developer | Software Development Practices

- Contributed backend services for attendance, geofencing, real-time chat, notifications, social features, rewards, and organization accounts in a layered Spring Boot architecture.
- Implemented real-time communication and scheduled workflows across a Spring Boot codebase spanning 100+ Java source files.

Cafe Delight Web Application | Project

Fall 2025

Full-Stack Developer | Construction of User Interfaces

- Co-developed a full-stack cafe catalog and ordering application with React, Vite, Node.js, Express, and Sequelize; owned cold-drink, dessert, FAQ, and component-styling features.
- Built product-browsing, authentication, ordering, review, administrative-workflow, and data-backed recommendation features.

HONORS AND AWARDS

Best Coder Award

2025

COM S 309 Software Development Practices

Honorable Project Award

2025

COM S 309 Software Development Practices

ADDITIONAL EXPERIENCE

Gaming Room Staff

Aug 2025 –
Present

Iowa State University | Ames, Iowa

- Communicated clearly with students and staff to explain facility policies, answer questions, and resolve concerns in a welcoming environment.
- Collaborated with team members to coordinate daily responsibilities, monitor the gaming room, and maintain a safe, organized space.