Yuki Ueno

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Computer Science Ph.D. student at Arizona State University, specializing in Data Visualization and Human Computer Interaction, with five years of industry experience as a fullstack software engineer.

EDUCATION

2025.01 – present **Ph.D. in Computer Science, Arizona State University** Tempe, AZ
- Research Areas: Data Visualization and Human-Computer Interaction
- Advisor: Prof. Chris Bryan

2017.04 – 2019.03 **M.Eng. in Electrical Engineering, Kyoto University** Kyoto, Japan
- Research Areas: Data Visualization and Human-Computer Interaction
- Advisors: Prof. Koji Koyamada and Prof. Hiroaki Natsukawa

2013.04 – 2017.03 **B.Eng. in Electrical and Electronic Engineering, Kyoto University** Kyoto, Japan
- Research Areas: Computer Vision, Human-Computer Interaction, and Human Sensing
- Advisor: Prof. Yuichi Nakamura

PROFESSIONAL EXPERIENCES

2019.04 – 2024.12 **Software Engineer, DENSO** Aichi, Japan
(DENSO is one of the world's leading automotive system suppliers)

2024.04 – 2024.12 Software Engineer in Cloud Services R&D Div.
- Develop backend and frontend software for yuricargo

2023.04 – 2024.03 Software Process Improvement Engineer in Woven by Toyota
- Developed software verification process standards for Arene OS in an international team

2019.04 – 2023.03 Data Engineer & BI Engineer in Software Production Innovation Div.
- Developed a data analysis platform for software development management to support data-driven decision-making with various technologies, including Python, SQL, Tableau, and AWS
- Developed a visualization system with ELK Stack to monitor application log data

AWARDS AND HONORS

2025 Honorable Mention on IEEE PacificVis 2025 Visual Storytelling Contest.
Yuki Ueno, Zhuojun Jiang, Bretho Danzy, Michael Kintscher, Nianwen Dan, Utkarsh Singh, and Chris Bryan. "The Story of Wagyu: Bringing Charm of Japan's Pride to the World." *IEEE PacificVis 2025 Visual Storytelling Contest*, 2025. demo

2025 Best Paper on The Visualization Society of Japan.
Yuki Ueno, Hiroaki Natsukawa, and Koji Koyamada. "Do Boxes Affect Exploration Behavior and Performance in Group-in-a-box Layouts?" *Journal of Visualization*, Vol.28, pp. 449-462, 2025. https://link.springer.com/article/10.1007/s12650-024-01037-2

PUBLICATIONS

JOURNAL

2025 **Yuki Ueno**, Hiroaki Natsukawa, and Koji Koyamada. "Do Boxes Affect Exploration Behavior and Performance in Group-in-a-box Layouts?" *Journal of Visualization*, Vol.28, pp. 449-462, 2025. [🏆 Best Paper] https://link.springer.com/article/10.1007/s12650-024-01037-2

2019 **Yuki Ueno**, Hiroaki Natsukawa, Nozomi Aoyama, and Koji Koyamada. "Exploration behavior of group-in-a-box layouts." *Journal of Visual Informatics* (also proc. *PacificVAST*), Vol. 3, No. 1, pp. 38-47, 2019. https://www.sciencedirect.com/science/article/pii/S2468502X19300208

CONFERENCE PAPERS

2019 Nozomi Aoyama, Yosuke Onoue, **Yuki Ueno**, Hiroaki Natsukawa, and Koji Koyamada. "User Evaluation of Group-in-a-Box Variants." In Proc. *IEEE PacificVis*, pp. 127-136, 2019. https://ieeexplore.ieee.org/document/8781570

WORKSHOP PAPERS, SHORT PAPERS, and OTHER

2025 Kentaro Takahira and **Yuki Ueno**. "VisAider: AI-Assisted Context-Aware Visualization Support for Data Presentations." *MERCADO Workshop at IEEE VIS 2025*, 2025. https://arxiv.org/abs/2510.14247

2025 **Yuki Ueno**, Zhuojun Jiang, Bretho Danzy, Michael Kintscher, Nianwen Dan, Utkarsh Singh, and Chris Bryan. "The Story of Wagyu: Bringing Charm of Japan's Pride to the World." *IEEE PacificVis 2025 Visual Storytelling Contest*, 2025. [🏆 Honorable Mention] demo

2018 **Yuki Ueno**, Hiroaki Natsukawa, Nozomi Aoyama, and Koji Koyamada. "Task Performance Classification During Visualization Evaluations Based on Physiological Signals." *VizAfrica 2018 Visualization Symposium*, 2018.

2018 Nozomi Aoyama, **Yuki Ueno**, and Koji Koyamada. "A Computational Evaluation of Eye-Tracking Measures in Group-in-a-Box Layouts." *VizAfrica 2018 Visualization Symposium*, 2018.

RESEARCH EXPERIENCES

2025.06 – 2025.10 **Augmented Algorithm** **Arizona State University**
Domain: Data Visualization, Human-Computer Interaction, Education
Advisors: Prof. Chris Bryan
- Developed an LLM-powered tool that converts static textbook pseudocode into interactive algorithm visualizations
- Utilized a fullstack architecture (Next.js, React, FastAPI) with LLM orchestration (LangGraph) deployed on AWS
- Usability studies and expert interviews demonstrated significant improvements in learning accessibility

2025.01 – 2025.03 **The Story of Wagyu** **Arizona State University**
Domain: Data Visualization, Storytelling
Advisors: Prof. Chris Bryan
- Developed a scroll-driven interactive visualization narrating the story of Japan's premium Wagyu beef
- Utilized HTML, CSS, Bootstrap, D3.js, jQuery, and Scrollama to create an engaging storytelling experience
- Awarded an ***Honorable Mention*** at the PacificVis 2025 Visual Data Storytelling Contest

2017.04 – 2019.03 **Evaluation of Group-in-a-Box Layout with Physiological Signals** **Kyoto University**
Domain: Data Visualization, Human-Computer Interaction, Cognitive Science
Advisors: Prof. Koji Koyamada and Prof. Hiroaki Natsukawa
- Investigated the behavioral patterns while interacting with graph drawings based on physiological signals
- Compared performance of several graph-drawing methods based on user experiments

2018.01 – 2018.02 **Evaluation of Emotion with Physiological Signals** **DENSO**
Domain: Human-Machine Interface, Cognitive Science
Advisor: Dr. Fumihiko Murase
- Investigated the relationship between subjects' emotions and physiological signals experienced while watching a video

2016.04 – 2017.03 **Modeling Machine Manipuration from Video Recording** **Kyoto University**
Domain: Computer Vision, Human-Computer Interaction, Human Sensing
Advisor: Prof. Yuichi Nakamura
- Modeled manipulation of a sewing machine to automatically create a meaningful instructional manual from experience videos

TEACHING EXPERIENCES

2018.04 – 2018.07 **ILAS Seminar in Visualization Lab, Kyoto University** Kyoto, Japan
(The ILAS Seminar is one of the Liberal Arts and Sciences Courses mainly for new undergraduate freshmen, taught in a small-group seminar format conducted by professors. The seminar topics included methods for data analysis of multidimensional data.)
Teaching Assistant

2017.10 – 2018.01 **Visualized Simulation Technology, Kyoto University** Kyoto, Japan
(Graduate Course)
Teaching Assistant

2017.04 – 2017.07 **Spacio-temporal Data Analysis for Multimedia, Kyoto University** Kyoto, Japan
(Graduate Course)
Teaching Assistant

ACADEMIC SERVICE

2025 External Reviewer, IEEE PacificVis 2026
2025 External Reviewer, IEEE VIS 2025
2018 Student Volunteer, IEEE PacificVis 2018

CERTIFICATIONS

2021 AWS Certified SysOps Administrator – Associate
2021 AWS Certified Solutions Architect – Associate
2020 AWS Certified Cloud Practitioner
2020 Applied Information Technology Engineer (Certification in Japan)

SKILLS

Programming Python, JavaScript, TypeScript, Java, C, SQL, Bash
Frontend HTML, CSS, Tailwind CSS, React, Next.js, Node.js, D3.js
Tools FastAPI, LangGraph, PostgreSQL, AWS, Docker, Serverless Framework, Elasticsearch, Tableau, GitHub