Rose Niousha

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EDUCATION

University of California, Berkeley   **California, USA**
Ph.D. - Electrical Engineering and Computer Science   *August 2023 - Present*
Waseda University   **Tokyo, Japan**
B.E. - Computer Science and Communications Engineering   *April 2019 - March 2023*

PUBLICATIONS

Rose Niousha, Muntasir Hoq, Bita Akram, and Narges Norouzi, Use of Large Language Models for Extracting Knowledge Components in CS1 Programming Exercises. *ACM SIGCSE*, Portland, March 2024.

Hironori Washizaki, Hiroshi Kobayashi, Hisashi Miyazaki, Yuna Tanaka, Erina Makihara, **Rose Niousha**, Katsutoshi Shintani, Eunjong Choi, Natsuko Noda, Study on Gender in Software Engineering in Japan by Systematic Literature Review. *IPSJ-SES*, August 2023.

Rose Niousha, Daisuke Saito, Hironori Washizaki, and Yoshiaki Fukazawa, Investigating the Effect of Binary Gender Preferences on Computational Thinking Skills. *MDPI Education Sciences*, April 2023.

Rose Niousha, Daisuke Saito, Hironori Washizaki, and Yoshiaki Fukazawa, Analyzing the Impact Gender Characteristics in Scratch Project Has on Computational Thinking Skills. *ACM SIGCSE*, Ontario, March 2023.

Rose Niousha, Daisuke Saito, Hironori Washizaki, and Yoshiaki Fukazawa, Scratch Project Analysis: Relationship Between Gender and Computational Thinking Skill. *IEEE TALE*, Hong Kong, December 2022.

RESEARCH EXPERIENCE

Graduate Student Researcher
Univeristy of California, Berkeley, California, USA   *August 2023 - Present*

- Developed a system using Large Language Models (LLMs) to automatically identify and map knowledge components in programming assignments.
- Analyzed artificial intelligence (AI), machine learning, and data science course prerequisites structure across American institutions, revealing challenges and diversity in course access.
- Integrated LLMs on PrairieLearn, an adaptive learning platform that supports automatic grading and personalized feedback, to offer personalized test case feedback on student code submissions.

Undergraduate Student Researcher
Waseda University, Tokyo, Japan   *April 2021 - March 2023*

- Investigated the gender impact on Computational Thinking (CT) in Scratch projects, revealing male-preferred projects yield higher CT scores.
- Contributed to transforming an Augmented Reality collaborative tool into a startup by designing mobile app interfaces for a tele-immersion system, enhancing remote pair programming for students.
- Led a team in creating AI feedback software to assess verbal communication in online discussions, using a DeepSpeech model for transcribing Japanese audio.

INDUSTRY EXPERIENCE

Education Specialist
International Student Advisors of Japan, Tokyo, Japan   *August 2019 - August 2023*

- Managed a class of 30+ students through 3- to 5-day programs.
- Led a discussion in English related to self-awareness, leadership, and diversity for Japanese students.

Student Fellow
Japan Venture Academy, Tokyo, Japan   *October 2022 - December 2022*

- Prototyped an automatic packaging solution for Japanese users who frequently send delicate packaging items.
- Conducted prototype testing to design an interactive application that users can easily engage with through collaboration with the Shibuya Startup Office.

Sales Specialist
Apple, Tokyo, Japan   *August 2019 - January 2022*

- Guided customers in selecting the best-fitting product by listening to their stories and uncovering their needs.
- Maintained one of the highest rates of customer satisfaction amongst the team while actively seeking feedback.

Technical Program Manager Intern

Tata Consultancy Services, Tokyo, Japan   *July 2021 - August 2021*

- Oversaw a team of software engineers incorporating an agile management system.
- Worked with the Client's R&D Engineering team to determine business process improvements.

TEACHING EXPERIENCE

Advanced Teaching Assistant - Introduction to C Programming

Waseda University, Tokyo, Japan   *Sep 2022 - Feb 2023*

- Tutored an introductory C programming course for undergraduate students covering topics such as variables, branches, loops, and pointers, structures.
- Held weekly office hour sessions to answer specific programming questions from each student.

EXTRACURRICULAR ACTIVITIES

Ambassador

Google Women Techmakers, California, USA   *September 2021 - Present*

- Actively engaged with women in tech to host events and participated as a panelist in Women Techmakers community sessions, aiming to inspire young women in the field.

Founder

Google Developer Student Club, Tokyo, Japan   *July 2021 - September 2022*

- Established the first Google Developer Student Club at Waseda University and managed the club to be the largest one in Japan with over 170 students.
- Managed to host both technical and non-technical events such as speaker sessions and study jams 3 times per month on average to empower university students regardless of their educational background.

Startup Mentor

Students for the Advancement of Global Entrepreneurship, Tokyo, Japan   *June 2019 - July 2020*

- Led a high school team to win a national competition on plastic reduction by mentoring their project development and pitch, culminating in World Cup participation.

Student Mentor

Tokyo Metropolitan Kokusai High School, Tokyo, Japan   *July 2019*

- Mentored students in excelling in college applications through personalized guidance such as personal statement revisions and interview preparations

Speaker

Musashino-FM Radio, California, USA   *February 2018*

- Secured interview after SAGE Cup participation, highlighting the winning business plan focusing on ethical fashion awareness and sustainable production promotion

HONORS AND AWARDS

UC Berkeley Prestigious Fellowship - *August 2023*
Waseda Department Award - *March 2023*
Waseda Engineering Student Representative Award - *March 2023*
Waseda Project Research Award - *March 2022*
Okawa Isawo Information Communications Scholarship - *February 2022*
Railway Information Systems Scholarship - *February 2022*
Bronze Medal (*Digital Transformation (DX) Innovation Competition*) - *November 2021*
Japan Embedded Systems Association Award (*DX Innovation Competition*) - *November 2021*
Hayashi Rheology Scholarship - *February 2021*
Kumon Toru Memorial Scholarships - *November 2018*
SAGE Global SDGs Gold Medal - *August 2018*
SAGE Japan Gold Recognition - *March 2018*

ADDITIONAL SKILLS

Programming Languages: Python, Java, Javascript, C, R, HTML, CSS
Spoken Languages: English (Native), Japanese (Native), Persian (Native)