KOHEI YAMAMOTO

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Executive Summary

- Solution Engineer with a robust background in application innovation, experienced in leading PoC initiatives for globally recognised clients. My specialisation is in cloud-native developments (including AI, mobile etc.), working together with account and product teams since joining Microsoft as a new grad hire.
- In parallel, Spatiotemporal Researcher, established a strong publication record with 10+ research papers published at Microsoft, National University of Singapore, IBM Research, and Yahoo Japan Research. My competencies lie in development of systematic frameworks from scratch, leveraging data modelling and algorithm integration techniques.

Special Post: Spotlighting Kohei's Parallel career globally by Microsoft on LinkedIn (EN | JP)

Key Skills

Technical Interests:
Cloud Architecture (Azure)
Application Innovation
AI/ML Application
Containerisation
Python

Research Interests:
Applied ML/AI
Spatiotemporal Modelling
Human Mobility
Computational Social Science
Wireless Localisation

Natural Languages:
Japanese (Native)
English (Fluent: TOEIC 935/990)

Licences:
Car Licence (Stickshift, Japan)

Technical Certificates:
Azure Expert: Solutions Architect (AZ305, AZ104)
Azure Associate: Administrator (AZ104), Developer (AZ204), Data Engineer (DP203)
Azure Fundamentals: (AZ900, AI900, DP900, SC900)

Work Experience & Research Initiatives

MICROSOFT

App Innovation Technical Specialist *(Azure App Innovation, Japan)*   Apr 2021 – Present

- Achieved 172% (FY23) Azure app cloud growth for Microsoft's VIP clients assigned exceptionally to a new grad hire as a solution engineer, by engaging in application innovation and leading PoC in cloud-native developments including AI, mobile etc.
- Published research on a cloud-native analytical framework for auto-modelling human mobility at IEEE, India, 2023.
- Received an award at Microsoft Global Hackathon **2022**, managing 22 members from 6 countries as well as **2023**, teaming up with a leadership team of Microsoft AI (Sadid Hasan, US).

NATIONAL UNIVERSITY OF SINGAPORE

Adjunct Researcher *(Dept of Architecture, Singapore)*   Apr 2021 – Present
Research Assistant *(Dept of Architecture, Singapore)*   Feb 2021 – Mar 2021

- Serving concurrently as an Adjunct Researcher at NUS while working at Microsoft.
- Joined an international research unit as a graduate, focusing on data modelling and algorithms integration to extract semantics from human mobility within unique building structures.
- Published research on a cloud-native analytical framework for modelling human mobility at IEEE, India, 2023.

IBM RESEARCH

Student Fellow *(Accessibility Research Unit, Japan)*   May 2018 – Jul 2018

- Engaged in a research unit to improve localisation accuracy for visually impaired individuals by integrating data mining and computer vision techniques.
- Published a research article in IPSJ, Japan, 2018.
- Received the Yamashita SIG Annual Research Award, IPSJ, Japan, 2020 as well as Honourable Mention Award, 2018.

YAHOO JAPAN RESEARCH

Student Fellow *(Data Science Unit, Japan)*   Mar 2017 – Nov 2018

- Engaged in collaborative graduation research focused on counteracting aging deterioration of localisation models and developed a training dataset selection algorithm using transfer learning and clustering WiFi data.
- Published 3+ research papers in esteemed conferences such as UbiComp, US, 2017.
- Nominated for Best Paper at IEEE, Italy, 2019.

Education

NATIONAL UNIVERSITY OF SINGAPORE

Master of Science in Applied GIS *(Dept of Geography, Singapore)*   Aug 2019 – Aug 2020

- Grade: Achieved a grade of 4.85/5, placing at the top tier of my cohort.
- Thesis: Marked 5.0/5. Juxtaposed Analysis of Individual and Group Movements from WiFi Signatures. Research Advisors: Zhou, G. and Feng, C.

RITSUMEIKAN UNIVERSITY

Bachelor of Engineering in Computer Science *(Dept of Computer Science, Japan)*   Apr 2014 – Mar 2018

- Grade: Achieved a grade of 4.63/5, placing at the top-placed graduate in the department.
- Thesis: Marked 5.0/5. Anti-Aging Calibration Methodology with User Log-Oriented Anomaly Detection for Wi-Fi Fingerprinting Localisation. Research Advisor: Nishio, N.

Awards & Honours

- Winning Award (2nd in Japan) at Microsoft Global Hackathon - the world's largest hackathon, 2023.
- Winning Award (3rd in Japan) at Microsoft Global Hackathon - the world's largest hackathon, 2022.
- Yamashita (Founder) SIG Annual Research Award, IPSJ, 2020.
- Best Paper Nomination, IEEE IPIN, 2019.
- Repayment Exemption from JASSO Student Loans for Excellent Achievements, 3,100 USD, 2019.
- Honourable Mention Award, IPSJ SIG AAC (Assistive and Accessible Computing), 2018.
- Future Generation Person Award for, 1,000 USD, 2018.
- Dean's Award, 100 USD, 2018.
- Promising and Prospective Person Award, 4,500 USD, 2017.
- Saionji (Founder) Memorial Award (Best Student Award), 6,000 USD, 2017.
- Saionji (Founder) Memorial Award (Best Student Award), 7,000 USD, 2016.
- Saionji (Founder) Memorial Award (Best Student Award), 7,000 USD, 2015.

Publications

- In peer review: Yamamoto, K., Lim, J., Biljecki, F. and Stouffs, R. Differentiating Impacts by Memory of Spatiotemporal Contexts and Machine Learning Approaches: Cloud-Native Modelling Framework for Human Mobility.
- In revision stage: Yamamoto, K., Zhou, G., and Feng, C. Juxtaposing Individual and Group Mobility from Sparse WiFi Signatures: A Case Study for Multidisciplinary University Campus.
- Yamamoto, K., Lim, J., Biljecki, F. and Stouffs, R., 2023. Analytical Framework in Cloud-Native Environments for Auto-Modelling Sparse Human Mobility Considering Memory of Past Contexts. In: Proceedings of 13th IEEE International Conference on Cloud Computing, Data Science and Engineering, India, pp. 87-91.
- Yamamoto, K., 2020. Juxtaposed Analysis of Individual and Group Movements from WiFi Signatures. M.Sc. Thesis, Department of Geography, National University of Singapore. Research Advisors: Zhou, G. and Feng, C.
- Tran, P., Zhao, M., Yamamoto, K., Minet, L., Nguyen, T. and Balasubramanian, R., 2020. Cyclists' personal exposure to traffic-related air pollution and its influence on bikeability. Transportation Research Part D: Transport and Environment, 88, pp. 102563.
- Tsubouchi, K., Yamamoto, K. and Nishio, N., 2019. No-Sweat Detective: No Effort Anomaly Detection for Wi-Fi-Based Localisation. In: Proceedings of IEEE International Conference on Indoor Positioning and Indoor Navigation, Italy, pp. 1-8.

- Yamamoto, K., Kan, F., Murao, K., Mochizuki, M. and Nishio, N., 2019. Manual Grading Task Support System with Interactive Correction Mechanism. The Transactions of Human Interface Society, 21(1), pp.73-84.
- Yamamoto, K., Murata, M. and Sato, D., 2018. Localisation Method Considering Characteristic Movements of Visually Impaired Persons (in Japanese). In: Proceedings of IPSJ SIG AAC Conference on Assistive and Accessible Computing, Japan, pp. 1-7.
- Yamamoto, K., 2018. Anti-Aging Calibration Methodology with User Log-Oriented Anomaly Detection for Wi-Fi Fingerprinting Localisation. B.Eng Thesis, Department of Computer Science, Ritsumeikan University. Research Advisor: Nishio, N.
- Yamamoto, K., Kan, F., Murao, K., Mochizuki, M. and Nishio, N., 2018. GERMIC: Application of Gesture Recognition Model with Interactive Correction to Manual Grading Tasks. In: Proceedings of EAI International Conference on Mobile Computing, Applications and Services, Japan, 40.
- Yamamoto, K., Tsubouchi, K. and Nishio, N., 2017. Anomaly Detection Method Specialized for Aging of Wi-Fi Localisation Model (in Japanese). In: Proceedings of Kobe University Ubiquitous and Wearable Workshop, Japan.
- Kawanaka, K., Yamamoto, K., Tsubouchi, K., Murao, K., Mochizuki, M. and Nishio, N., 2017. Detecting Aged Deterioration of a Radio Base Station Map for Wi-Fi Positioning. In: Proceedings of ACM International Joint Conference on Pervasive and Ubiquitous Computing and Proceedings of the ACM International Symposium on Wearable Computers (Ubicomp'17), USA. pp. 547-556.
- Kan, F., Yamamoto, K., Murao, K., Mochizuki, M. and Nishio, N., 2017. Implementation of Scoring System by Handwriting Recognition and Interactive Correction Mechanism (in Japanese). In: Proceedings of IPSJ Conference on Multimedia, Distributed, Cooperative and Mobile Symposium, Japan, 1754-1760.

Presentations

- Yamamoto, K. & Okazaki, T., 2023. Presentation on the Utilisation of Generative AI at Japan Association of Corporate Executives (経済同友会).
- Yamamoto, K., 2023. Analytical Framework in Cloud-Native Environments for Auto-Modelling Sparse Human Mobility Considering Memory of Past Contexts. At 2023 IEEE International Conference on Cloud Computing, Data Science and Engineering, 19-20 January 2023 New Delhi, India.
- Yamamoto, K., 2019. No-Sweat Detective: No Effort Anomaly Detection for Wi-Fi-Based Localisation. At 2019 IEEE International Conference on Indoor Positioning and Indoor Navigation, 30 September-3 October 2019 Pisa, Italy.
- Yamamoto, K., 2018. Localisation Method Considering Characteristic Movements of Visually Impaired Persons (in Japanese). At 2018 IPSJ SIG AAC Conference on Assistive and Accessible Computing, 24-25 August 2018 Tokyo, Japan.
- Yamamoto, K., 2018. GERMIC: Application of Gesture Recognition Model with Interactive Correction to Manual Grading Tasks. At 2018 EAI International Conference on Mobile Computing, Applications and Services, 28 February-2 March 2018 Osaka, Japan.
- Yamamoto, K., 2018. Anti-Aging Calibration Methodology with User Log-Oriented Anomaly Detection for Wi-Fi Fingerprinting Localisation. At B.Eng Thesis Defence, 8 February Shiga, Japan.
- Yamamoto, K., 2017. Anomaly Detection Method Specialized for Aging of Wi-Fi Localisation Model (in Japanese). At 2017 Kobe University Ubiquitous and Wearable Workshop, 22-23 December 2017 Hyogo, Japan.
- Yamamoto, K., 2017. Cross-Interactivity in EdTech. At 2018 Japan-China Conference of University Presidents as a representative, 18-22 October 2017 Dalian, China.
- Yamamoto, K., 2017. Detecting Aged Deterioration of a Radio Base Station Map for Wi-Fi Positioning. At 2017 ACM International Joint Conference on Pervasive and Ubiquitous Computing and Proceedings of 2017 ACM International Symposium on Wearable Computers (Ubicomp'17), 11-15 September 2017 Hawaii, USA.
- Yamamoto, K., 2017. Implementation of Scoring System by Handwriting Recognition and Interactive Correction Mechanism (in Japanese). At 2017 IPSJ Conference on Multimedia, Distributed, Cooperative and Mobile Symposium, 28-30 June 2017 Hokkaido, Japan.
- Yamamoto, K., 2016. Acceleration of Mutual Interaction Using IT Media. As a delegation to USA from the Ministry of Foreign Affairs of Japan, 8-15 March San Jose, USA.

Other Notable Engagements

- Delegated to China as a Representative – As a representative of the university, delegated to Japan-China Universities' President's Conference to discuss "IT, tertiary education and AI", Oct 2017.

- Delegated to the U.S. from MOFA – Delegated to the U.S. for the national purpose to accelerate mutual (Japan-U.S.) interaction utilising IT media; promoted by Ministry of Foreign Affairs of Japan, Feb 2016.