Tomoyuki KOYAMA / 小山 智之

Software Engineer & Doctoral Student

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Work Experience

Software Engineer, Mercari, Inc.
March 2024 – Present

Support Engineer, Amazon Web Services Japan G.K.
April 2023 – February 2024

Education

Doctoral Student, Tokyo University of Technology, Japan
April 2024 – Present

Master of Computer Science, Tokyo University of Technology, Japan
March 2023

Bachelor of Computer Science, Tokyo University of Technology, Japan
March 2021

Publications

Refereed

1. T. Koyama, T. Kushida, and S. Ikuno, "Root Cause Analysis for Middleware Issues by Kubernetes Resource Events," Knowledge and Smart Technology International Conference (KST), Thailand, 2026, TBD. **Best Paper Award**

2. 小山 智之, 串田 高幸, 生野 壮一郎, "Kubernetes のリソースイベントと依存グラフとトレースによる障害の原因調査にかかる時間の短縮," 第 33 回マルチメディア通信と分散処理ワークショップ (DPSWS 2025) 講演論文集, pp. 268–275, 2025. **優秀ポスター賞**

3. M. Hirao, T. Koyama, and T. Kushida, "Reduction of redundant alerts by relationship discovery based on port usage," 9th International Conference on Information and Communication Technology for Intelligent Systems (ICTIS 2025), Bangkok, Thailand, pp. 501–511, 2025.

4. T. Koyama, T. Kushida, and S. Ikuno, "Query Prediction for Log Search for Distributed Tracing with External Monitoring Alerts," 7th Conference on Cloud and Internet of Things (CIoT), Montreal, QC, Canada, pp. 1–7, 2024.

5. T. Koyama and T. Kushida, "Log message with JSON item count for root cause analysis in microservices," 6th Conference on Cloud and Internet of Things (CIoT), Lisbon, Portugal, pp. 55–61, 2023.

6. T. Koyama and T. Kushida, "Distributed Log Search Based on Time Series Access and Service Relations," Proceedings of the 36th International Conference on Advanced Information Networking and Applications (AINA-2022), Volume 2. Cham: Springer International Publishing, pp. 105–117, 2022.

7. 小山 智之, 串田 高幸, "検索クエリに配慮した配置による分散ログ検索の高速化," 情報処理学会論文誌, vol. 63, no. 2, pp. 504–514, 2022.

Non-refereed

1. A. Vyass, T. Koyama, V. Vinodkumar, and T. Kushida, "Real-Time NO2 monitoring alert using XG-Boost," Tokyo University of Technology CDSL Technical Report, CDSL-TR-139, Mar, 2023.

2. 中川 翔太, 小山 智之, 串田 高幸, "WebAssembly のメモリにおける増加量とリクエスト数の比による必要量の推定を用いたインスタンスの再起動," 第 14 回大学コンソーシアム八王子学生発表会, Dec. 3, 2022.

3. 近藤 悠斗, 内野 彰紀, 田中 美帆, 川端 ももの, 小山 智之, 串田 高幸, "ウェブインターフェースでのマウス操作によるサイト構築の簡略化," 第 14 回大学コンソーシアム八王子学生発表会, Dec. 3, 2022.

4. 小山 智之, 串田 高幸, "検索性能に配慮した複製による分散ログ管理," 研究報告マルチメディア通信と分散処理 (DPS), 2020-DPS-185, no. 17, pp. 1–8, Dec. 14, 2020.

5. 小山 智之, 串田 高幸, "OS の自動インストール設定の対話型作成と統一記法," 研究報告マルチメディア通信と分散処理 (DPS), 2020-DPS-182, no. 55, pp. 1–7, March 5, 2020.

Talks

1. Tomoyuki Koyama, "Developer's Database Operation Issues Revealed through Surveys and Repository Analysis", mercari GEARS 2025, Nov. 13, 2025

2. 小山 智之，前田 敦史，"スケールと信頼性を求めて：メルカリ流 TiDB 移行とベストプラクティス", TiDB User Day 2025, Oct. 3, 2025

3. 小山 智之，"パケットを覗いてみよう", 多摩科学技術高校 サイエンスワークショップ, March 2018

Awards

- **Best Paper Award**, The 18th International Conference on Knowledge and Smart Technology (KST-2026), Jan. 2026

- **優秀ポスター賞**, 第 33 回 マルチメディア通信と分散処理ワークショップ (DPSWS2025), Nov. 2025

- **Research Award**, Graduate School of Bionics, Computer and Media Science Program, Tokyo University of Technology, March 2023

- **Research Award**, School of Computer Science, Tokyo University of Technology, March 2021

Community Activities and Volunteers

- **Mentor/Founder**, Cloud Native Dojo, Aug. 2021 – Mar. 2023

- **Volunteer hackathon staff**, StarT-Tech, May 2021 – Sep. 2021

- **CODEBLUE network team member**, CODEBLUE 2019, Sep. 2019 – Oct. 2019

- **STM (ShowNet Team Member)**, Interop Tokyo 2019, June 2019

- **Internet Week NOC team member**, Internet Week 2018, Oct. 2018 – Nov. 2018

- **SC-NOC(Security Camp Network Operation Community) tutor**, Security Camp 2018, Aug. 2018

- **Trainee**, Security Camp 2017, Aug. 2017

- **Volunteer conference staff**, PyCon JP, May 2017 – Dec. 2019

Last update: March 1, 2026