

CURRICULUM VITAE



Short Biography - Kabul Kurniawan received Ph.D. degree in Computer Science from [University of Vienna](#), Austria in 2023. He previously received a B.Sc and M.Sc degree in Computer Science at [Universitas Gadjah Mada \(UGM\)](#) Indonesia in 2013 and 2015 respectively. He was a research assistant at the Institute of Software and Information System, [Vienna University of Technology](#) in 2018 prior joining the Institute of Data, Process, and Knowledge Management as a project assistant at [Vienna University of Business and Economics](#), in 2020. He is currently a Research Engineer at [Center for Digital Production \(CDP\)](#) Austria as well as a Post-Doctoral Researcher at [Vienna University of Business and Economics](#). His research includes Cybersecurity, Data Interoperability, Knowledge Graphs, and Industry 4.0. He has published several research papers in top-tier journals (Comp. & Security, MAKE) and has presented his work at prestigious top-tiers international conferences (e.g., ESWC, ISWC, Semantics, ARES, IFIP SEC, etc).

I. PERSONAL INFORMATION

Full Name : Kabul Kurniawan
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Place / Date of Birth : Pekalongan / November 30 1987
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Current Address (Austria) : Simmeringer Haupstrasse 78/2/3 1110 Vienna, Austria
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II. EDUCATIONAL BACKGROUND

- **Doctor of Technology (Dr. Techn.)**, Multimedia and Information System Group, Faculty of Informatics, [University of Vienna](#), Austria (May 2017 – 2023). Completed with: “Excellence”.
- **Master of Computer Science (M.Cs)**, Department of Computer Science and Electronics, Faculty of Mathematics and Natural Sciences, [Gadjah Mada University](#), Indonesia (2013-2015) Completed with 3.50 Grade Point Average (Very Satisfactory).
- **Bachelor of Computer Science (S.Kom)**, Department of Computer Science and Electronics, Faculty of Mathematics and Natural Sciences, [Gadjah Mada University](#), Indonesia (2010-2013) Completed with 3.16 Grade Point Average (Very Satisfactory).
- **Diploma 3 (D3) of Computer and Information System**, Department of Mathematics, Faculty of Mathematics and Natural Sciences, [Gadjah Mada University](#), Indonesia (2007-2010) Completed with 3.58 Grade Point Average (Cumlaude).

III. WORKING EXPERIENCES

- **Post-Doc Researcher**, Institute for Data, Process and Knowledge Management, [Vienna University of Economics and Business](#), Vienna, Austria. (2023 – Now).
- **Research Engineer**, Austrian Center for Digital Production (ACDP), Austria. (2023 – Now).

- **Praedoc Researcher (Project Assistant)**, Institute for Data, Process and Knowledge Management, [Vienna University of Economics and Business](#), Vienna, Austria. (2020 – 2023).
- **Researcher (Project Assistant)**, Institute Software and Information System, Faculty of Informatics, [TU Vienna](#), Vienna, Austria. (2018 - 2020).
- **Independent IT Consultant** at The Department of Communication and Informatics, [Sleman Regency](#). Yogyakarta, Indonesia (2011 –2017).
- **Web Developer** of Library of Gajah Mada University, Indonesia (2009 – 2010).
- **Web Developer** of [PT. Gamatechno](#), Yogyakarta, Indonesia (2008 – 2009).

IV. TEACHING EXPERIENCES

- **Lecturer**, Department of Computer Science/Informatics, Faculty Sciences and Mathematics, [Diponegoro University](#), Indonesia (January 2017 – May 2017)
- **Instructor**, Department of Computer Science and Electronics, Faculty Mathematics and Natural Sciences, [Gadjah Mada University](#), Indonesia (2013-2015)
- **Instructor**: Computer & Information System at Vocational School [Gadjah Mada University](#), Indonesia (2011 –2013)

V. PROJECT EXPERIENCES

- **Teaming.AI. (2021-Now)**, H2020 ICT-38, Platform for Maining and evolving AI Systems in Manfuacturing (Teaming.ai), € 530.375, Project Assistant (Researcher)
- **SESPES, (2018-2021)** Austrian Science Fund (FWF), “Semantic processing of Security Event Streams”, € 308.000, Project Assistant (Researcher).

VI. PUBLICATIONS

A. Conference Proceedings

- Kropatschek, S., **Kurniawan, K.**, Boshale, P., Hollerer, S., Kiesling, E., & Winkler, D. (2023). Towards A Knowledge Graph-based Framework for Integrated Security and Safety Analysis in Digital Production Systems. Proceedings of the ISWC 2023 Posters, Demos, and Industry Tracks. 20th International Semantic Web Conference (ISWC). <http://hdl.handle.net/20.500.12708/192702>
- Krause, F., **Kurniawan, K.**, Kiesling, E., Paulheim, H., Polleres, A. (2023). *On the Representation of Dynamic BPMN Process Executions in Knowledge Graphs*. In: Ortiz-Rodriguez, F., Villazón-Terrazas, B., Tiwari, S., Bobed, C. (eds) Knowledge Graphs and Semantic Web. KGSWC 2023. Lecture Notes in Computer Science, vol 14382. Springer, Cham. https://doi.org/10.1007/978-3-031-47745-4_8
- Bayomie, D., Revoredo, K., Bachhofner, S., **Kurniawan, K.**, Kiesling, E., & Mendling, J. (2022, November). *Analyzing Manufacturing Process By Enabling Process Mining on Sensor Data*. In The Practice of Enterprise Modeling (PoEM) Workshops. 2022. https://ceur-ws.org/Vol-3298/paper_DTE_625.pdf
- Bachhofner, S., **Kurniawan, K.**, Kiesling, E., Revoredo, K., Bayomie, D. (2022). *Knowledge Graph Supported Machine Parameterization for the Injection Moulding Industry*. In: Knowledge Graphs and Semantic Web . KGSWC 2022. vol 1686. Springer, Cham. https://doi.org/10.1007/978-3-031-21422-6_8.
- Stefan Bachhofner, Elmar Kiesling, **Kabul Kurniawan**, Emanuel Sallinger, Philipp Waibel. 2021. *Knowledge Graph Modularization for Cyber-Physical Production Systems*. Proceedings of the ISWC 2021 Posters, Demos, and Industry Tracks: From Novel Ideas to Industrial Practice co-located with 20th International Semantic Web Conference (ISWC). <http://ceur-ws.org/Vol-2980/paper333.pdf>

- **Kabul Kurniawan**, Andreas Ekelhart and Elmar Kiesling. 2021. *An ATT&CK-KG for Linking Cybersecurity Attacks to Adversary Tactics and Techniques*. Proceedings of the ISWC 2021 Posters, Demos, and Industry Tracks: From Novel Ideas to Industrial Practice co-located with 20th International Semantic Web Conference (ISWC). <http://ceur-ws.org/Vol-2980/paper363.pdf>
- **Kabul Kurniawan**, Andreas Ekelhart and Elmar Kiesling, Gerald Qurichmary, A Min Tjoa. 2020. *Virtual Knowledge Graph for Log Analysis*. The 16th International Conference on Availability, Reliability, and Security (ARES 2021). Association for Computing Machinery (ACM), New York, NY, USA. <https://doi.org/10.1145/3465481.3465767>
- **Kabul Kurniawan**, Andreas Ekelhart, FajarEkaputra and Elmar Kiesling. 2020. *Cross-Platform File System Activity Monitoring and Forensics - A Semantic Approach*. The 35th International Conference on Information Security and Privacy Protection (IFIP Sec Conference). Springer International Publishing, Cham, 384-397. https://doi.org/10.1007/978-3-030-58201-2_26
- Amazona Adorada, Panji Wisnu Wirawan, **Kabul Kurniawan**. 2020. *The Comparison of Feature Selection Methods in Software Defect Prediction*. The 4th International Conference on Informatics and Computational Sciences (ICICoS)– Institute of Electrical and Electronics Engineers (IEEE) <https://doi.org/10.1109/ICICoS51170.2020.9299022>
- **Kabul Kurniawan**, Andreas Ekelhart, Elmar Kiesling, Agnes Froschl, and Fajar Ekaputra. 2019. *Semantic Integration and Monitoring of File System Activity*. In the 15th International Conference on Semantic Systems (SEMANTiCS). <http://dx.doi.org/10.13140/RG.2.2.11376.81928/1>
- Elmar Kiesling, Andreas Ekelhart, **Kabul Kurniawan**, and Fajar Ekaputra. 2019. *The SEPSES Knowledge Graph: An Integrated Resource for Cybersecurity*. In The Semantic Web – The 18th International Semantic Web Conference (ISWC). Vol. 11779. Springer International Publishing, Cham, 198–214. https://doi.org/10.1007/978-3-030-30796-7_13
- Andreas Ekelhart, Elmar Kiesling, and **Kabul Kurniawan** 2018. *Taming the logs - Vocabularies for semantic security analysis*. Proceedings of the 14th International Conference on Semantic Systems (SEMANTiCS). Procedia Computer Science 137, 109–119. <https://doi.org/10.1016/j.procs.2018.09.011>
- **Kabul Kurniawan**. *Semantic Query Federation for Scalable Security Log Analysis*. 2018. in The Semantic Web: ESWC 2018 Satellite Events, vol. 11155. Cham: Springer International Publishing. pp. 294–303. https://doi.org/10.1007/978-3-319-98192-5_48
- W. T. Lestari, E. Suharto, P. W. Wirawan and **Kabul Kurniawan**. 2019. *Trust and Risk for Measuring OnlineTax Application Acceptance*. The 3rd International Conference on Informatics and Computational Sciences (ICICoS). Institute of Electrical and Electronics Engineers (IEEE). pp. 1-6. <https://doi.org/10.1109/ICICoS48119.2019.8982473>
- Djalal Er Riyanto, Panji Wisnu Wirawan, **Kabul Kurniawan**. 2018. *E-Government Interoperability: Architecture Model for Public Information Services of Sub-District Governments*. MATEC Web Conf. 218 03008. <https://doi.org/10.1051/matecconf/201821803008>
- **Kabul Kurniawan**, Fajar Ekaputra and Peb Ruswono Aryan. 2018. *Semantic Service Description and Compositions: A Systematic Literature Review*, The 2nd International Conference on Informatics and Computational Sciences (ICICoS). Institute of Electrical and Electronics Engineers (IEEE). pp. 1-6. <https://doi.org/10.1109/ICICoS.2018.8621686>
- P. R. Aryan, F. J. Ekaputra, E. Kiesling, A. M. Tjoa and **Kabul Kurniawan**. 2017 *RMLx: Mapping interface for integrating open data with linked data exploration environments*. 2017. The 1st International Conference on Informatics and Computational Sciences (ICICoS), Institute of Electrical and Electronics Engineers (IEEE). <https://doi.org/10.1109/ICICoS.2017.8276347>
- **Kabul Kurniawan** and Ahmad Ashari. 2015. *Service orchestration using enterprise service bus for real-time government executive dashboard system*. The International Conference on

Data and Software Engineering (ICoDSE), Institute of Electrical and Electronics Engineers (IEEE). pp. 207-212. <https://doi.org/10.1109/ICODSE.2015.7436999>

B. Journals

- Widodo, Aris Puji, Adi Wibowo, and **Kabul Kurniawan**. "Enhancing Software User Interface Testing Through Few Shot Deep Learning: A Novel Approach for Automated Accuracy and Usability Evaluation." International Journal of Advanced Computer Science and Applications, West Yorkshire Vol. 14, Iss. 12, (2023). <https://doi.org/10.14569/IJACSA.2023.0141260>
- **Kabul Kurniawan**, Andreas Ekelhart and Elmar Kiesling, Gerald Qurichmary, A Min Tjoa. 2021. KRYSTAL: Knowledge Graph-based Framework for Tactical Attack Discovery in Audit Data. Computers & Security, Volume 121, <https://doi.org/10.1016/j.cose.2022.102828>.
- **Kabul Kurniawan**, Andreas Ekelhart and Elmar Kiesling, Gerald Qurichmary, A Min Tjoa. 2022. VloGraph: A Virtual Knowledge Graph Framework for Distributed Security Log Analysis. Mach. Learn. Knowl. Extr.(MAKE) 2022, 4, 371-396. <https://doi.org/10.3390/make4020016>
- **Kabul Kurniawan** and Ahmad Ashari. 2015. Penerapan SOA menggunakan Enterprise Service Bus pada Proses Pengecekan Status Perizinan Pemerintah Kabupaten Sleman. 2015 IJCCS (Indonesian Journal of Computing and Cybernetics Systems), Yogyakarta, Volume 10, Issue 2, pp. 137-148. <https://doi.org/10.22146/ijccs.15525>

C. Book Chapters

- Franz Krause, **Kabul Kurniawan**, Elmar Kiesling, Jorge Martinez-Gil, Thomas Hoch, Mario Pichler, Bernhard Heinzl, Bernhard Moser. (2024). Leveraging Semantic Representations via Knowledge Graph Embeddings. In: Soldatos, J. (eds) Artificial Intelligence in Manufacturing. Springer, Cham. https://doi.org/10.1007/978-3-031-46452-2_5
- Jorge Martinez-Gil, Thomas Hoch, Mario Pichler, Bernhard Heinzl, Bernhard Moser, **Kabul Kurniawan**, Elmar Kiesling, Franz Krause (2024). Examining the Adoption of Knowledge Graphs in the Manufacturing Industry: A Comprehensive Review. In: Soldatos, J. (eds) Artificial Intelligence in Manufacturing. Springer, Cham. https://doi.org/10.1007/978-3-031-46452-2_4

D. Preprint

- Chang Sun, Federico Igne, Gianmarco Spinaci, **Kabul Kurniawan**, Marc Gallofré Ocaña. Glenda Amaral. John Domingue. 2019. Privacy-Protection within the Evolution and Preservation of Knowledge Graphs: The VAD 2 ER approach towards Medical Citizen Science. International Semantic Web School (ISWS) Report. <http://dx.doi.org/10.13140/RG.2.2.20536.47360>

E. Thesis

- **Ph.D. Thesis**, *Improving Cybersecurity through Semantic Log Monitoring, Analysis and Attack Reconstruction*, University of Vienna. March 2023.
- **M.Sc. Thesis**, *Implementation Of Service Oriented Architecture (SOA) Using Enterprise Service Bus (ESB) as a Mediator Of Information System Integration*. Gadjah Mada University. Yogyakarta. Indonesia. August 2015
- **B.Sc. Thesis**, *Web Service Implementation Using WSO2 Framework (Case Study: Payroll Information System for Sleman Regency Government)*. Gadjah Mada University. Yogyakarta. Indonesia. December 2012

VII. ACHIEVEMENT/AWARDS

- **Research Award:** WU Award for Outstanding Research Achievement for Journal titled: . *KRYSTAL: Knowledge Graph-based Framework for Tactical Attack Discovery in Audit Data*. Vienna, 2023.
- **Publication Award:** Third Best Paper for Paper titled: *Knowledge Graph Supported Machine Parameterization for the Injection Moulding Industry* at Knowledge Graphs and Semantic Web (KGSWC). Madrid Spain. 2022
- **Awardee - Doctoral Scholarship** (Beasiswa Unggulan Luar Negeri) from The Ministry of Education and Culture, Indonesia (2017-2019)
- **Awardee - Master Scholarship**, from the Ministry of Research and Higher Education (Dikti), Indonesia (2013-2015)
- **Awardee – Bachelor Scholarship**, Prestigious Student Scholarship (Beasiswa PPA), Gadjah Mada University (2011-2013)
- **Finalist** of National Student Science Week - Pekan Ilmiah Mahasiswa Nasional (PIMNAS) for title "*SIPENI : Sistem Peringatan Dini Daerah Aliran Sungai Gunung Merapi*", from the Ministry of Research and Higher Education (Dikti) (July 2011)
- **Awardee** of Creativity Program of College Student Grant (PKM) for the title "*SAJAK : Sistem Anti Penjiplakan*", from the Ministry of Research and Higher Education (Dikti) (March 2011)
- **Awardee** of Creativity Program of College Student Grant (PKM) for title "*Sistem Monitoring Akses Internet untuk Meningkatkan Kinerja Karyawan*". from the Ministry of Research and Higher Education (Dikti) (March 2010)
- **Awardee** of Van Deventer-Maas Stichting (VDMS) Bachelor Scholarship Deutch (2008-2010)

VIII. CONFERENCES/SUMMER SCHOOLS

A. Presenter at Conferences

- **Presenter**, The 22th International Semantic Web Conference (ISWC), 2023. Athen, Greece.
- **Presenter**, The 20th International Semantic Web Conference (ISWC), 2021 (Virtual)
- **Presenter**, The 16th International Conference on Availability, Reliability, and Security (ARES Conference) 2021, Vienna, Austria (Virtual)
- **Presenter**, 35th International Conference on Information Security and Privacy Protection – (IFIP Sec 2020), Maribor, Slovenia (Virtual)
- **Invited Presenter**, 15th International Conference of Semantic Systems (SEMANTiCs Conference), 2019, Karlsruhe, Germany
- **Presenter**, The 15th Extended Semantic Web Conference (ESWC), 2018, Heraklion, Crete, Greece
- **Presenter**, The 2nd International Conference on Informatics and Computational Sciences (ICICoS), 2018, Semarang, Indonesia
- **Presenter**, The 1st International Conference on Informatics and Computational Sciences (ICICoS), 2017, Semarang, Indonesia
- **Presenter**, International Conference on Data and Software Engineering (ICoDSE), 2015, Yogyakarta, Indonesia

B. Participant at Summer Schools

- **Student**, The 17th Reasoning Web Summer School (RW) 2021. Virtual
- **Student**, The International Semantic Web Schools (ISWS) 2019, Bertinoro, Italy
- **Student**, The 3rd KEYSTONE Training School on Keyword search in Big Linked Data, 2017, Vienna, Austria

IX. ORGANIZATIONAL & EVENT ACTIVITIES

A. Events

- **Chief of Committee:** The Indonesian General Election Committee for Austria & Slovenia (Panitia Pemilihan Umum Luar Negeri – PPLN) (February 2023 – April 2024)
- **Organizing Committee - Student Team:** The 14th International Conference of Semantic Systems (SEMANTiCS), Vienna, Austria. (September 2018)
- **Committee:** The Indonesian General Election Committee for Austria & Slovenia (Panitia Pemilihan Umum Luar Negeri – PPLN) (March 2018 – April 2019)
- **Organizing Committee - Student Team:** the 16th International Semantic Web Conference (ISWC), Vienna, Austria. (October 2017)

B. Organizations

- **Chief Executive** –The Indonesian and Malaysian Muslim community in Austria (WAPENA) (2018-2023)
- **Education Division** – The Indonesian Student and Youth Association in Austria (PPI Austria) (2017-2018)
- **Chief Executive Organization (CEO)** - Opera Campus Crew, Gajah Mada University, Indonesia (2010)
- **Head of Web and Multimedia Division**, Organisasi Mahasiswa Ahli TI Himakom, Faculty of Mathematic and Natural Science, Gajah Mada University, Indonesia (2009)

X. SPEAKER AT SEMINARS/WORKSHOPS/TALKSHOWS

- **Kabul Kurniawan**, "Knowledge Graph for Cybersecurity – an Introduction", As-Salam Leader's Talk (ALT), Warga Pengajian Austria (WAPENA), Vienna, Austria March 2021
- **Kabul Kurniawan**, "Pengenalan Teknologi Web Terdesentralisasi", PHP Indonesia Online Learning , PHP Indonesia, Indonesia 2021
- **Kabul Kurniawan**, "The Decentralized Web", As-Salam Leader's Talk (ALT) , Warga Pengajian Austria (WAPENA), Vienna, Austria April 2020
- **Kabul Kurniawan**, "Introduction to the Web of Data", As-Salam Leader's Talk (ALT) , Warga Pengajian Austria (WAPENA), Vienna, Austria December 29th 2019
- **Kabul Kurniawan**, "Seminar Tugas Akhir Komputer dan Sistem Informasi", Himpunan Mahasiswa Komputer dan Sistem Informasi (Himakomsi) , Sekolah Vokasi Universitas Gadjah Mada, Yogyakarta, Mei 3rd 2012
- **Kabul Kurniawan**, "IT Blog & Web Hosting", *Badan Eksekutif Mahasiswa Peternakan* , Fakultas Peternakan *Gajah Mada University*, Yogyakarta, October 29th 2011
- **Kabul Kurniawan**, "Menjadi Mahasiswa 2.0", *First Gathering of Computer Kids - Firefoks* - Himpunan Mahasiswa Ilmu Komputer, *Gajah Mada University*, Yogyakarta, October 8th 2011
- **Kabul Kurniawan**, "Implementasi Cloud Computing di Blog", *Sekolah Media Informasi MII - Keluarga Muslim FMIPA*, *Gajah Mada University*, Yogyakarta, March 27th 2011
- **Kabul Kurniawan**, "Teknik Presentasi", *Sekolah Riset dan Jurnalistik 2011 - Lingkar Studi Sains (LSIS) FMIPA*, *Gajah Mada University*, Yogyakarta, March 16th 2011
- **Kabul Kurniawan**, "Self Management Training", *Social General Politic Camp (SGPC) - Badan Eksekutif Mahasiswa (BEM) FMIPA*, *Gajah Mada University*, Yogyakarta, March 12th 2011
- **Kabul Kurniawan**, "Build Your Own Corporation", *Technopreneurship Seminar - Organisasi Mahasiswa Ahli TI (Omah TI)*, *Gajah Mada University*, Yogyakarta, December 23rd 2010
- **Kabul Kurniawan**, "Design Graphicholic", *Graphic Design Concept Seminar, OPERAND (Omah TI Pas Ramadhan)* - *Organisasi Mahasiswa Ahli TI (Omah TI)*, *Gajah Mada University*, Yogyakarta, September 2nd 2010
- **Kabul Kurniawan**, "MIPA Great Creation in Web & Graphic Design", *Web Blogging & GIMP Tutorial*, *Badan Eksekutif Mahasiswa - Lingkar Studi Sains FMIPA*, *Gajah Mada University*, Yogyakarta, June 6th 2010

- **Kabul Kurniawan**, "Improve Your System's User Experience", *Management Project & Application Framework Seminar - Organisasi Mahasiswa Ahli TI (Omah TI)*, Gadjah Mada University, Yogyakarta, May 25th 2010
- **Kabul Kurniawan**, "Mengelola Blog dengan Efektif", *Special Workshop for the members of Sekolah Media Informasi - KMFM*, Gadjah Mada University, Yogyakarta, May 9th 2010
- **Kabul Kurniawan**, "Realita : Dampak Internet untuk Anak", *Special Talkshow for Students of Sekolah Tinggi Multimedia MMTC Yogyakarta*, Studio M Radio, Sekolah Tinggi Multimedia MMTC, Yogyakarta, March 31st 2010
- **Kabul Kurniawan**, Graphic Design Tutorial with GIMP, *Special Training for Indonesia Professional Foundation Grant*, Computer Lab (III), FMIPA Selatan, UGM, Yogyakarta, February 27th 2010
- **Kabul Kurniawan**, Maximize Your PowerPoint Presentation, *Special Training for the Participants of PKM (Pekan Kreatifitas Mahasiswa)* . Auditorium FMIPA Utara, UGM, Yogyakarta, February 20th 2010
- **Kabul Kurniawan**, Digital Library With Sipus version 4.0, *Web Application Workshop for Librarians of Gadjah Mada Universty*, Ruang Seminar, Gedung Perpustakaan Unit II, UGM. October 19th 2009
- **Kabul Kurniawan**, Together With Tech, Together We Can, *Web Development Workshop for Chemistry Students of Yogyakarta State University*, Lab. Komputer, Jurdik Kimia FMIPA UNY, Maret 2009
- **Kabul Kurniawan**, Improve your Design Skill, Graphic Design Seminar, Ruang Seminar, Gedung Matematika FMIPA UGM, May 2008