JIN **IGARASHI**

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Senior software engineer specializing in GIS, water and sanitation fields more than 10 years of work experience in Japan and Eastern Africa. Developed various GIS applications in Fujitsu at the beginning of my career in Japan. Then, worked in Eastern Africa (Kenya and Rwanda) for water supply management as GIS specialist. Developed GIS systems for assets management of water supply facilities and Non-Revenue Water management and conducted training for FOSS4G (Free and Open Source for Geospatial) applications such as QGIS and PostGIS. I am also heavily involved in FOSS4G community, now I am mainly contributing to translate FOSS4G software such as QGIS/QField, Input, Lizmap to Japanese language. Furthermore, I am contributing Japanese language translation of some hydrology training courses in GISOpenCourseWare powered by IHE Delft institute. Also, I joined United Nations Vector Tile Toolkit team, and am developing my own GIS open source software for water utilities in developing countries.

Since I started to be involved in water projects in the East Africa region, I became interested in studying water and sanitation engineering. Hence, I am currently a MSc water, sanitation and health engineering student at the University of Leeds since September 2021. In my master's dissertation, I am researching about full lifecycle costs of urban sanitation systems in Narok town of Kenya as an example. I am interested in working in the water sector in developing countries by applying the skills and experience of GIS/ICT.

EXPERIENCE

DECEMBER 2022 – PRESENT
GIS CONSULTANT, UNITED NATIONS DEVELOPMENT PROGRAMME, NEW YORK
Develop GeoHub platform in SDG integration team, Bureau for Policy and Programme Support, UNDP as Individual GIS consultant. Working remotely from the United Kingdom.

AUGUST 2021 – MARCH 2022
SOFTWARE ENGINEER, GEOLONIA INC., JAPAN
Develop Open-Source GIS Software regarding to vector tiles as a part time.

JUNE 2021 – NOVEMBER 2021
SOFTWARE ENGINEER, OCEAN EYES CO., LTD, JAPAN
Develop their WebGIS frontend application (Vuejs) and conduct technical advice and support for enhancement as a freelancer.

OCTOBER 2020 – AUGUST 2021
SOFTWARE ENGINEER, MIERUNE INC., JAPAN

Mainly develop WebGIS systems by using FOSS4G (Free & Open Source Software for Geospatial) as GIS specialist. Also, joined several open source GIS activities. Experience Photon (open source geocoder), Elasticsearch, Django, etc.)

JANUARY 2020 –SEPTEMBER 2020

SOFTWARE ENGINEER, ONE COMPATH CO., LTD., JAPAN

Developed and operated the one of most popular web map service in Japan which is called "MAPION". I developed and improved their operations of mapping system which is using Mapbox Vectortiles and Mapserver on Amazon Web Service (AWS).

APRIL 2017 – DECEMBER 2019

CONSULTANT, KOKUSAI KOGYO CO., LTD., JAPAN

Conducted the followings projects funded by Japan International Cooperation Agency (JICA).
- The Project for Strengthening Operation and Maintenance of Rural Water Supply Systems in Rwanda (RWASOM project) (06/2018-12/2019)
- Survey for the Establishment of the Experimental Field for the GNSS System Development in the Kingdom of Thailand (11/2018-11/2019)
- Preparatory Survey for the Project for Strengthening Nzove-Ntora Principal Water Transmission Pipeline in Kigali City, Rwanda" (10/2017-11/2018)

Conducted training workshops for data collection and sharing with FOSS4G applications, then designed & created GIS database and data sharing platform for rural water supply management in RWASOM project. Collaborated with Rwandan colleagues to complete mapping all of water supply systems in the country. The system in Rwanda uses PostGIS, Lizmap/QGIS Server, QGIS Desktop, QField and Garmin GPS.

OCTOBER 2016 – MARCH 2017

SOFTWARE ENGINEER, FUJITSU SOCIAL SCIENCE LABORATORY, LTD., JAPAN

Designed and developed following GIS applications.
- the development of HD map for autonomous vehicle (ArcGIS Server, Python, Django REST framework).
- the system of mapping and simulating location of ships' movement in Singapore (Leafletjs).

APRIL 2014 – SEPTEMBER 2016

GIS SPECIALIST, NAROK WATER AND SEWERAGE SERVICES CO., LTD., KENYA

Worked as a GIS specialist funded by JICA and conducted the following activities.
- Mapped the entire water distribution network (approximately 300km length of pipeline in Total) in Narok and Ololulung'a town (Trimble GPS, ArcPAD, QGIS).
- Designed and developed GIS database & WebGIS (PostGIS, Mapserver, Leafletjs). The system links to billing system, it helps improve their revenue collections.
- Created the DMAs (District Metered Areas) for analyzing and improving Non-Revenue water management.
- Conducted training to transfer technical knowledge to Kenyan colleagues, then GIS system is continuously being used up to now since it has been developed.
- Consulted GIS work for 7 water services providers (Nyeri water, Kabarnet water, Kapsabet water, Nakuru water, Nakuru rural water, Naivasha water and Mavoko water) in Kenya.

APRIL 2009 – MARCH 2014

SOFTWARE ENGINEER, FUJITSU SOCIAL SCIENCE LABORATORY, LTD., JAPAN

Designed and developed the following systems. Most of the systems are related to GIS.

- Web-GIS system for the Real Property Registration system in Ministry of Justice of Japan (Mapserver, OpenLayers, Oracle).
- An Android application for health care management (Java).
- An area marketing system by using MapInfo.
- Logistics and distribution management system with Dijkstra routing algorism (VB.NET, SQL Server, MS Access).

EDUCATION

MARCH 2009

BACHLOR OF ARTS, TOKAI UNIVERSITY, KANAGAWA, JAPAN

Studied history of international relationship between China, Korea and Japan during 16 centuries.

JULY 2007

CHINESE LANGUAGE, SCHOOL OF CHINESE AS A SECOND LANGUAGE, PEKING UNIVERSITY, BEIJING, CHINA

Studied Chinese language and Chinese history for a year.

SKILLS

- Software Engineering
  - Software design and development
  - JavaScript (Nodejs, TypeScript, VueJS, Svelte, Mapbox GL JS, Leafletjs, OpenLayers, jQuery)
  - Python (pandas/geopandas, Django)
  - Java
  - Database design
  - SQL (PostgreSQL/PostGIS, SQL Server, Oracle)
  - Search engine (Elasticsearch)
  - Geocoding (Photon, Nominatim)
  - Training and workshop of GIS
- Water and Sanitation Engineering
  - Assets Management of water and sanitation facilities
  - EPANET
  - Non-Revenue Water management
  - Data management and analysis

ACTIVITIES

FEBRUARY 2022

Presented about "A case study of Open Source GIS in rural water management in Rwanda" at Webinar for water utilities of West African countries hosted by JICA.

OCTOBER 2021

Presented three talks about use cases of Rwanda and Kenya's GIS activities in FOSS4G 2021 Bues Aires Online (https://2021.foss4g.org).

- "FOSS4G software developments for Water Utilities Management in Eastern Africa by using Vector Tiles"
- "The impact of application of FOSS4G on Non-Revenue Water" (Presenter was Mr. James Njenga, I was backup)
- "An implementation of FOSS4G - QGIS, QField and Vector Tiles for rural water supply management in Rwanda" (Presenter was Mr. Moise Irankunda, I was backup)

FEBRUARY 2021

Joined "Open Education for QGIS" session by Hans van der Kwast (lecturer of IHE Delft Institute) as a panel at QGIS Open Day.

JANUARY 2021

Presented about "A case study of Open Source GIS in rural water management in Rwanda" at Webinar for water utilities of West African countries hosted by JICA.

NOVEMBER 2020

Presented about "Use cases of Vector Tiles implementation for water utilities in Eastern Africa" at FOSS4G Korea 2020 online conference.

OCTOBER 2020

Presented about "A cheap and easy way to utilize GIS for effective management of water utility" at WaQuAc Net (Water Quality Asian Cooperation Network, http://waquac.net/english) Webinar.

SEPTEMBER 2020

Presented about "Vector Tiles implementation for water services providers in Eastern Africa" in FOSS4G Hokkaido.

MARCH 2020 – PRESENT

Developing my own open source tools which can develop and host vector tiles easily for small organization such as water services companies in GitHub (https://github.com/watergis).

SEPTEMBER 2019 – PRESENT

Conducting Japanese translation of QField for QGIS (https://qfield.org).

AUGUST 2019

Presented about use cases of Rwanda and Kenya's GIS activities in FOSS4G 2019 Bucharest (https://2019.foss4g.org).

- URL of Kenya's presentation: https://media.ccc.de/v/bucharest-135-case-study-of-non-revenue-water-management-of-narok-water-in-kenya
- URL of Rwanda's presentation: https://media.ccc.de/v/bucharest-30-case-study-of-data-collection-data-sharing-for-rural-water-supply-management-in-rwanda

AUGUST 2018

Attended in FOSS4G 2018 Dar es Salaam (https://2018.foss4g.org) in August 2018.

APRIL 2017 – PRESENT

Became a member of WaQuAc Net (Water Quality Asian Cooperation Network, http://waquac.net/english).

QUALIFICATIONS

APRIL 2022
Designing a Multidimensional Poverty Index (United Nations Development Programme (UNDP) and the Oxford Poverty and Human Development Initiative (OPHI))

NOVEMBER 2021
BSAFE (United Nations Department of Safety and Security)

NOVEMBER 2021
Prevention of sexual exploitation and abuse (PSEA) (UNICEF)

NOVEMBER 2021
Prevention of sexual harassment and abuse of authority (2021 version) (UN & UN agencies)

JUNE 2017
PCM MONITORING EVALUATION (FASID - FOUNDATION FOR ADVANCED STUDIES ON INTERNATIONAL DEVELOPMENT)

MAY 2017
PCM PARTICIPATORY PLANNING (FASID – FOUNDATION FOR ADVANCED STUDIES ON INTERNATIONAL DEVELOPMENT)

NOV 2009
FUNDAMENTAL INFORMATION TECHNOLOGY ENGINEER EXAMINATION (INFORMATION TECHNOLOGY PROMOTION AGENCY, JAPAN)

MAY 2009
INFORMATION TECHNOLOGY PASSPORT EXAMINATION (INFORMATION TECHNOLOGY PROMOTION AGENCY, JAPAN)

LANGUAGES

- English (Fluent, IELTS Overall6.5, CEFR: B2, in March 2021)
- Japanese (Native)
- Chinese (Fluent, HSK Chinese Proficiency Test Grade 9 in April 2009)
- Swahili (Fluent)