WP3
Development of the Labour Market Observatory in Vietnam

Outcome 3.1
Analysis of the data from WP2

Contents

1.1. Programmer

SECTION 1
Name of the professional figure
Programmer/ Software Engineer
Where it works
Technical Departments, Software Development Departments
The activities
- Analyse customer needs. - Write and test codes for computer programs, website and mobile applications. - Develop technical solutions to customer requirements. - Update and optimize existing software and applications. - Support end-user about software problems. - Maintain and troubleshoot software and systems.
Qualifications
- At least Bachelor's degree in computer and information technology areas such as Computer Science, Software Engineering, Information Technology. - For an entry/fresher level, no experience is required. For junior level, 1 or 2 years of experience are required. For more senior level, more than 4,5 years of experience are required.
Technical skills
Depending on a particular position, a programmer is required to be familiar with or an expert in a certain programming framework, platform, software, and language such as Android, iOS, Java, PHP, NET, C#.
Computer and linguistic knowledge
Communication in English at basic level
Personality and availability
- Teamwork and cooperation skills - Communication skill - Goal management skill

- Problem solving skill
- Personalities: intitiave, dependability, integrity, stress tolerance, persistance, and attentive to details

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SECTION 2

Economic sector
The economic sector in which the professional figure was detected: ICT

Seniority level
- Study small technique of function point or easy tasks (fresher or internship level). - Code some mini task or small project (junior level). - Code full mini project or some task, and self-give technical solution (senior or higher level).

Academic qualification - I level
Candidate graduated in Software Engineer with Bachelor's degree. If you interested in software, you could study in software education center and go to work.

Academic qualification - II level
Front-End: have good knowledge and experience in HTML, CSS, Jquery, JavaScript, … Back-End: have good knowledge and experience in C#, Java, PHP, NodeJS, Golang, … Framework: Angular, React, Vue, Laravel, .net core, Sharepoint, Odoo, Magento, … Database: SQL server, MySQL, Oracle, Postgree, NoSQL, DB2, … Design pattern: SOLID, MVC, MVVM, …

Academic qualification - III level
Candidates study many technical skills, and just focus on a little to good at, according to their position. Almost they study hardly from vendor materials or real projects.

1.2. QC Staff/Tester

SECTION 1
Name of the professional figure
QC/Tester
Where it works
ICT enterprises, Technical Departments, Software Development Departments, Software Testing Department, Quality Assurance Department.
The activities
- Analyse design documents. - Work with the software development team to develop testing strategies. - Develop and write test cases, checklist. - Execute testing, detect defects, log defect in the defect tracking system. - Report test results. - Investigate defect reports and work with developers to correct.
Qualifications
- At least Bachelor's degree in computer and information technology areas such as Computer Science, Software Engineering, Information Technology. - For an entry level, no experience is required. For more senior level, 3 or more years of experience are required.
Technical skills
Knowledge of testing methodology, tools, and testing management software such as Agile methodology, Katalon, Selenium.
Computer and linguistic knowledge
Communication in English at basic level
Personality and availability
- Teamwork and cooperation skills - Communication skill - Goal management skill - Problem solving skill

- Personalities: intitiave, dependability, integrity, stress tolerance, persistance, and attentive to details

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SECTION 2

Economic sector
The economic sector in which the professional figure was detected: ICT

Seniority level
- Study technique skills and business processes (fresher or internship level). - Create script for manual testing (junior level). - Code or implement for automation testing (senior level).

Academic qualification - I level
Candidate graduated Bachelor's degree in Software Engineer or other field related IT, and the must spend a lot of time to explore the usage of many applications.

Academic qualification - II level
Have good knowledge and experience in usage applications. Good at script and code in automation test tool is an advantage.

Academic qualification - III level
Candidates study some testing courses in Selenium, Katalon or the same.

1.3. IT Engineer/ IT Staff

SECTION 1

Name of the professional figure
IT Engineer/IT Staff

Where it works

Technical Departments, IT Departments
The activities
- Maintain computer systems and networks.   - Identify and recover errors and incidents relating to software, hardwares and networks.   - Set up software and support end-users in using software.   - Install network equipment and other IT equipment.   - Operate websites and recover website incidents.   - Support network administrator in operating server systems.
Qualifications
- At least Bachelor's degree in computer and information technology areas such as Information Technology, Computer Engineering Technology, Computer Network and Data Communication.   - An experience in IT support is often preferred.
Technical skills
Knowledge of CMS frameworks (Wordpress, Joomla), network services (domain, SQL, VPN), common office software (MS Office), web programming, office computer and network equipment. A certificate on network administration (such as MCSA, MCITS, CCNA, CCNP) is a plus.
Computer and linguistic knowledge
Communication in English at basic level
Personality and availability
- Teamwork and cooperation skills.   - Communication skill.   - Goal management skill.   - Problem solving skill.   - Personalities: intitiave, dependability, integrity, stress tolerance, persistance, and attentive to details.
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SECTION 2

Economic sector
The economic sector in which the professional figure was detected: ICT

Seniority level
- Study technology and skill mini task (fresher or internship level). - Do easy tasks (junior level). - Build system architecture or solution, trouble shooting difficult issuses (senior or higher level).

Academic qualification - I level
Candidate graduated Bachelor's degree in IT.

Academic qualification - II level
Help desk: computer trouble shooting, customer services, CompTA+ Networking: CCNA or CCNP certificate. Have knowledge about other vendors's technology such as Paloalto, Fortigate, Draytek , ... Cantdidate can self-study with ducuments of manufacter. System: MCSA, MCTS, LPI, Office 365 suite, AWS, cloud computing, Sharepoint, Oracle EBS, Microsoft exchange, Microsoft Dynamic AX, …

Academic qualification - III level
Candidates study many technical skills, and just focus on a little to good at, according to their position. Almost they study hardly from vendor materials or real projects.

1.4. Data Engineer

SECTION 1
Name of the professional figure
Data Engineer
Where it works
Technical Departments, Software Development Departments, IT Department, R& D Department, AI Center, AI Department.

The activities
- Analyse customer requirements. - Design data warehouses. - Develop ELT tools and database pipelines. - Develop algorithms to transform data into useful information. - Create new data validation methods and data analysis tools. - Implement/Develop AI software. - Develop Business Intelligence system.

Qualifications
- At least Bachelor's degree in computer and information technology areas such as Information Technology, Computer Science. - An experience in data engineering is often preferred.

Technical skills
- Proficiency of common programming languages such as C#, Java, Python, R, Ruby, Scala and SQL. - A good understanding of ETL (extract, transform, load) tools and APIs for creating and managing data integration jobs. - Knowledge of relational and non-relational databases (NoSQL databases, Apache Spark, MySQL and PostgreSQL) and Unix-based operating systems (OS) such as Unix, Solaris and Linux. Being familiar with tools and frameworks for machining learning, deep learning, big data. Knowledge of cloud computing and data security is a plus.

Computer and linguistic knowledge
Communication in English at basic level

Personality and availability
- Teamwork and cooperation skills - Communication skills - Goal management skills - Problem solving skills - Personalities: intitiave, dependability, integrity, stress tolerance, persistance, and attentive to details.

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SECTION 2
Economic sector
The economic sector in which the professional figure was detected: ICT
Seniority level
- Study basic technique in data engineer (fresher or internship level). - Code and implement software related with data and AI (junior level). - Build solution and code difficult task in AI software or Data software (senior or higher level).
Academic qualification - I level
Candidate graduated Bachelor's degree in Computer Science. If you interested in data, you could study in software education center and go to work.
Academic qualification - II level
Tool: Microsoft power BI, Tableau, Excel, SQL/TSQL. Programe language: Python, R, C++, Java, Django, Flask, … Libraries: Tensorflow, Pytorch, Sklearn, Keras, Matplotlib, Spark, PySpark, Hadoop, Apache, … Deep learning/Data Science: CNN, LSTM, RNN, …
Academic qualification - III level
Candidates study many technical skills, and just focus on a little to good at, according to their position. Almost they study hardly from vendor materials or real projects.

1.5. Business Analyst

SECTION 1
Name of the professional figure
Business Analytist (BA)

Where it works
Technical Departments, Software Development Departments, Sales Department

The activities
- Work closely with the customer to identify, clarify and analyse the customer requirement. - Build various requirement specifications (user requirement specification, functional specification, system requirement specification, etc.), use cases, user stories. - Work with the development team to provide the solution proposal to the customer. - Support in testing, verifying bugs/issues with the customer. - Write user guide and train staff in how to use the new application.

Qualifications
- At least Bachelor's degree in computer and information technology areas such as Information Technology, Information System. Degrees in business areas could be applicable. - For entry level, basic experience in developing or testing software is often required. For more senior level, 3 or more years of experience are required.

Technical skills
- Knowledge of software development process, especially software requirement analysis and modelling languages and tools. - Basic knowledge of programming, database and testing techniques. - General understanding business processes. - Depending on a position, a specific business domain knowledge is a plus (banking, insurance, health care, human resources, etc).

Computer and linguistic knowledge
Communication in English at basic level

Personality and availability
- Teamwork and cooperation skills. - Communication skill. - Goal management skill. - Problem solving skill. - Personalities: intitiave, dependability, integrity, stress tolerance, persistance, and attentive to details.

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SECTION 2
Economic sector
The economic sector in which the professional figure was detected: ICT
Seniority level
- Interview end user alone or with leader (fresher or internship level).   - Analyse requirement and write document for developer (junior level).   - Interveiw, write document and consult solution for users (senior or higher level).
Academic qualification - I level
Candidate graduated Bachelor's degree in Information Management System. If you interested in BA job, you could study some related courses and start of works for this position.
Academic qualification - II level
Soft skill is required for BA jobs: communication, negotiation, take note, visualization, document. Agile methodlogy is an advantage. Knowledge about IT system and business is well for BA.
Academic qualification - III level
Candidates study many technical skills, and just focus on a little to good at, according to their position. Almost they study hardly from vendor materials or real projects.

1.6. UI/UX Designer

SECTION 1
Name of the professional figure
UI/UX Designer
Where it works

Technical Departments, Software Development Departments, Marketing Department
The activities
- Investigate user requirements. - Develop a comprehensive UI/UX design strategy for the product. - Produce UX design solutions through wireframes, visual and graphic designs, flow diagrams, storyboards, site maps, and prototypes. - Design UI elements and tools such as navigation menus, search boxes, tabs, and widgets. - Develop UI mock-ups and prototypes. - Test UI elements and UX solutions. - Collaborate with the marketing and development teams to optimize the user experience.
Qualifications
- At least Bachelor's degree in computer and information technology areas or in graphic design.
Technical skills
- Knowledge of common wireframing, prototyping and designing tools (Sketch, Figma, InVision, Adobe Suite, Visio, etc.). - Knowledge of web technologies and platforms (HTML, CSS, iOS, Android). - Knowledge of aesthetic and usability principles.
Computer and linguistic knowledge
Communication in English at basic level
Personality and availability
- Teamwork and cooperation skills. - Communication skill. - Goal management skill. - Problem solving skill. - Personalities: intitiave, dependability, integrity, stress tolerance, persistance, and attentive to details.
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SECTION 2

Economic sector
The economic sector in which the professional figure was detected: ICT

Seniority level
- Design some easy tasks (fresher or internship level). - Make schetch, wireframe, mockup, prototype of future production (junior level). - Can do all tasks as junior with more difficult, recommend to software development (senior or higher level).

Academic qualification - I level
Candidate graduated Bachelor's degree in Design or Art. Candiate should study extra courses in Design and using design tool, after that they practice a lot and join to real project.

Academic qualification - II level
Design thinking, UI/UX methodlgy, Agile methodlgy, Adobe CS/AI/Photoshop cources

Academic qualification - III level
Candidates study many technical skills, and just focus on a little to good at, according to their position. Almost they study hardly from vendor materials or real projects.

1.7. Deployment Staff

SECTION 1
Name of the professional figure
Deployment staff/Implement staff
Where it works
Technical Departments, Software Development Departments
The activities
- Work with the customer to develop a deployment plan that meets their need.

- Deploy new systems at the customer site, update existing systems, or decommission old systems as needed.
- Test and troubleshoot installed systems.
- Guide and train the customer on using the installed systems.
- Provide technical support to the customer.
- Help in creating user guides.
- Create tools for automatic deployment.

Qualifications
- At least Bachelor's degree in computer and information technology areas such as Computer Science, Software Engineering, Information Technology. - For an entry/fresher level, no experience is required. For junior level, 1 or 2 years of experience are required. For more senior level, more than 4,5 years of experience are required.

Technical skills
Depending on the installed system, specific knowledge and skills of software technologies and platforms will be required. However, knowledge of networking, database, server technologies are generally required.

Computer and linguistic knowledge
Communication in English at basic level

Personality and availability
- Teamwork and cooperation skills. - Communication skill. - Goal management skill. - Problem solving skill. - Personalities: intitiave, dependability, integrity, stress tolerance, persistance, and attentive to details.

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SECTION 2
Economic sector

The economic sector in which the professional figure was detected: ICT
Seniority level
- Can install software or deploy small system (fresher or internship level). - Deploy software from developer and support end user or training the useage of it (junior level). - Automation deploy code as DevOps, supply ultilities for developers and support other members in team (senior level).
Academic qualification - I level
Candidate graduated Bachelor's degree in Information Technology. Some candidate graduated in other field such as Telecomunication, Electronic want to change jobs, they study many extra course in software.
Academic qualification - II level
Language programming with basic level: Javascript, HTML, CSS, C#, Java, PHP, … Knowledge in system: Cloud computing, software management tool, CI/CD tool, …
Academic qualification - III level
Candidates study many technical skills, and just focus on a little to good at, according to their position. Almost they study hardly from vendor materials or real projects.

1.8. Software Architect

SECTION 1
Name of the professional figure
Software architect
Where it works
Technical Departments, Software Development Departments, R&D Department
The activities
- Work with the product manager and other stakeholders to clarify and document platform requirements/specs (functional and non-functional).

- Defining and create platform architecture models using modern software architecture, design patterns and solutions for high performance, high scalability, high availability, security, integrability and maintainability.
- Work with the development team to implement platform core services/base framework.
- Provide and monitor platform architecture design documentation, coding standards, implementation guidelines as well as ensure high quality implementation/code quality for the development team.
- Ensures that all relevant project teams follow a common set of principles and patterns and utilize a standard set of technology frameworks and libraries.
- Participate in technical reviews and lead the team in solving technical issues, contribute and maintain software architecture design standards, base frameworks, coding standards, best practices, common libraries at company level.

Qualifications

- Bachelor's degree or equivalent in Computer Science, Information Technology. Master degree is an advantage.
- Experience in software development and a minimum of 3 years of experience in system architecture design or technical team leader.
- Experience establishing legacy modernization and migration roadmaps for large-scale applications.

Technical skills

- Extensive hand-on experiences in defining software architecture models of large-scale software systems from scratch using UML, 4+1 Model, C4 Model
- Deep knowledge of common architectural patterns and service design (SOA, microservices, messaging, twelve-factor methodology, integration patterns…)
- Experience with programming languages: Php, Python, JavaScript, node.js, C#, Java…, coding in RDBMS, NoSQL (MySql/MariaDB, PostgreSql, SQL Server, Redis, MongoDB, Cassandra, ES.
- Knowledge of statistics, data mining, machine learning and operational excellence of production systems is a plus.

Computer and linguistic knowledge

Communication in English at basic level

Personality and availability

- Teamwork and cooperation skills.
- Communication skills.

- Goal management skills. - Problem solving skills. - Personalities: intitiave, dependability, integrity, stress tolerance, persistance, and attentive to details.
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SECTION 2
Economic sector
The economic sector in which the professional figure was detected: ICT
Seniority level
Design architecture of software or system in high level or low level (senior or higher level).
Academic qualification - I level
Candidate graduated Bachelor or Master in Software Engineer.
Academic qualification - II level
Good at some programm languge in full stack. Have many years in software development or product management. Have some certificates: TOGAF, ITIL, COBIT, CMMI, …
Academic qualification - III level
Candidates study many technical skills, and just focus on a little to good at, according to their position. Almost they study hardly from vendor materials or real projects.

1.9. Network Engineer/Systems Engineer/Network Administrator

SECTION 1
Name of the professional figure
Network Engineer, System Engineer, Network administrator

Where it works
Technical Departments, IT Departments

The activities
- Install, configure, and maintain network equipment and devices. - Monitor network performance, analyse, and recommend required tunings to boost performance. - Perform system upgrades including service packs, patches, hot fixes and security configurations. - Troubleshoot network outages and connectivity issues. - Implement security tools, policies, and procedures.

Qualifications
- At least Bachelor's degree in computer and information technology areas such as Information Technology, Computer Engineering Technology, Computer Network and Data Communication. - An experience in IT support is often preferred.

Technical skills
- Knowledge of IP network/VLAN/VPN/Security products. Knowledge of network protocols (such as STP, HSRP, VRRP, EIGRP, OSPF, Policy Base Routing, IP SLA, EtherChannel, etc.). - Knowledge of server operation systems (Linux, Window). Knowledge of network devices (such as Cisco, Juniper, etc.). - Holding certification in network administration (such as CCNP, CCSA) is a plus.

Computer and linguistic knowledge
Communication in English at basic level

Personality and availability
- Teamwork and cooperation skills. - Communication skill. - Goal management skill. - Problem solving skill. - Personalities: intitiave, dependability, integrity, stress tolerance, persistance, and attentive to details.

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SECTION 2
Economic sector
The economic sector in which the professional figure was detected: ICT
Seniority level
- Study technology and skill mini task (fresher or internship level). - Do easy tasks (junior level). - Build system architecture or solution, trouble shooting difficult issuses (senior or higher level).
Academic qualification - I level
Candidate graduated in IT with Bachelor's degree.
Academic qualification - II level
Help desk: computer trouble shooting, customer services, CompTA+ Networking: CCNA or CCNP certificate. Have knowledge about other vendors's technology such as Paloalto, Fortigate, Draytek , ... Cantdidate can self-study with ducuments of manufacter. System: MCSA, MCTS, LPI, Office 365 suite, AWS, cloud computing, Sharepoint, Oracle EBS, Microsoft exchange, Microsoft Dynamic AX, …
Academic qualification - III level
Candidates study many technical skills, and just focus on a little to good at, according to their position. Almost they study hardly from vendor materials or real projects.

1.10. Cloud Computing Engineer

SECTION 1
Name of the professional figure

Cloud Computing Engineer
Where it works
Technical Departments, IT Departments
The activities
- Develop and implement cloud infrastructure. - Configure cloud infrastructure components. - Migrate computer systems to the cloud. - Create applications and databases that perform on the cloud. - Monitor cloud management and data storage services. - Develop and maintain scripts to automate system tasks.
Qualifications
- At least Bachelor's degree in computer and information technology areas such as Information Technology, Computer Engineering Technology, Computer Network and Data Communication. - An experience in IT support is often preferred.
Technical skills
- Knowledge of common cloud platforms (such as Amazon Web Services, Microsoft Azure, Google Cloud, and IBM Cloud). - Knowledge of data storage and security on cloud. Knowledge of networking protocols. - Knowledge of common programming languages used in cloud computing (such as Python, Java, Ruby). - Knowledge of network operating systems such as Windows and Linux.
Computer and linguistic knowledge
Communication in English at basic level
Personality and availability
- Teamwork and cooperation skills. - Communication skill. - Goal management skill. - Problem solving skill.

- Personalities: intitiave, dependability, integrity, stress tolerance, persistance, and attentive to details.

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SECTION 2

Economic sector
The economic sector in which the professional figure was detected: ICT

Seniority level
- Study technology and skill mini task (fresher or internship level). - Do easy tasks (junior level). - Build system architecture or solution, trouble shooting difficult issuses (senior or higher level).

Academic qualification - I level
Candidate graduated in IT with Bachelor's degree.

Academic qualification - II level
Help desk: computer trouble shooting, customer services, CompTA+ Networking: CCNA certificate. System and cloud: MCSA, MCTS, LPI, Office 365 suite, AWS, cloud computing, DevOps tool,..

Academic qualification - III level
Candidates study many technical skills, and just focus on a little to good at, according to their position. Almost they study hardly from vendor materials or real projects.

1.11. AI Engineer

SECTION 1

Name of the professional figure

AI Engineer
Where it works
Technical Departments, Software Development Departments, AI center, AI Department, R&D Development
The activities
- Develop AI-based applications. - Research and develop AI models and algorithm. - Transform machine learning models into APIs that can be integrated with other applications. - Build end-to-end a Machine Learning application. - Automate AI infrastructures.
Qualifications
- At least Bachelor's degree in computer and information technology areas, or in Applied Math and Data Science. - Experience in AI Engineering is often preferred.
Technical skills
- Proficiency of programming languages (Python, R, Java, and C++). - Knowledge of probability, statistics, and linear algebra. - Knowledge of big data technologies (Apache Spark, Hadoop, and MongoDB). - Knowledge of AI algorithms and frameworks (machine learning algorithms, deep learning algorithms, Theano, TensorFlow, Caffe, Keras, and PyTorch).
Computer and linguistic knowledge
Communication in English at basic level
Personality and availability
- Teamwork and cooperation skills - Communication skill - Goal management skill - Problem solving skill - Personalities: intitiave, dependability, integrity, stress tolerance, persistance, and attentive to details

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Economic sector
The economic sector in which the professional figure was detected: ICT

Seniority level
- Research and develop an AI application or some tasks in the project (fresher, internship or junior level). - Research, write pager or build solution for AI project/application (senior or higher level).

Academic qualification - I level
Candidate graduated Bachelor's degree in Computer Schience. If you interested in AI, you could study and work in this feild.

Academic qualification - II level
Knowledge algorithm: CNN, RNN, LSTM, GA, Transformer, Reinforment Learning, NLP, Big Data, … Libraries and frameworks: Tensorflow, PyTorch, Numpy, Sklearn, R, Django, Flask, … Read and write paper in AI.

Academic qualification - III level
Candidates study many technical skills, and just focus on a little to good at, according to their position. Almost they study hardly from vendor materials or real projects.

1.12. Telecommunications Engineer

SECTION 1
Name of the professional figure
Telecommunications Engineer

Where it works
Technical Departments, IT Departments, Networking Department
The activities
- Design, develop, test and install voice and data telecommunications networks. - Develop proposals and determine costs and timelines for telecommunications projects. - Test and implement new products and services. - Configure networks and interconnected systems. - Research, analyse and design system specifications. - Identify and solve issues with current network systems. - Monitor systems and identify needs for upgrades and enhancements.
Qualifications
- At least Bachelor's degree in Electronic Engineering – Telecommunication. - An experience in IT support is often preferred.
Technical skills
- Knowledge of telecommunications systems such as mobile networks, CCTV, PABX, PA, ACS, IP and VoIP. - Knowledge of software for designing telecom networks and systems.
Computer and linguistic knowledge
Communication in English at basic level
Personality and availability
- Teamwork and cooperation skills. - Communication skill. - Goal management skill. - Problem solving skill. - Personalities: intitiave, dependability, integrity, stress tolerance, persistance, and attentive to details.
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SECTION 2

Economic sector
The economic sector in which the professional figure was detected: ICT

Seniority level
- Study technology and skill mini task (fresher or internship level). - Do easy tasks (junior level). - Build system architecture or solution, trouble shooting difficult issuses (senior or higher level).

Academic qualification - I level
Candidate graduated in IT with Bachelor's degree.

Academic qualification - II level

Academic qualification - III level
Candidates study many technical skills, and just focus on a little to good at, according to their position. Almost they study hardly from vendor materials or real projects.

1.13. IoT Engineer/ IoT Developer

SECTION 1
Name of the professional figure
IoT Engineer, IoT Developer
Where it works
Technical Departments, Software Development Departments, AI center, AI Department, R&D Development
The activities
- Analyse customer needs. - Develop software that allows IoT devices to function and connect to other devices. - Design, code and test features of IoT devices. - Design platform solutions that are cloud-compatible and work with IoT applications.

- Research and develop IoT technologies.

Qualifications
- At least Bachelor's degree in ICT areas such as Computer Science, Information Technology, Software Engineering, Telecommunications, Electronics Engineering. - Experience with programming front-end and back-end systems is preferred.

Technical skills
- Proficiency of programming languages (Python, R, Java, and C++). - Knowledge of probability, statistics, and linear algebra. - Knowledge of big data technologies (Apache Spark, Hadoop, and MongoDB). - Knowledge of AI algorithms and frameworks (machine learning algorithms, deep learning algorithms, Theano, TensorFlow, Caffe, Keras, and PyTorch).

Computer and linguistic knowledge
Communication in English at basic level

Personality and availability
- Teamwork and cooperation skills - Communication skill - Goal management skill - Problem solving skill - Personalities: intitiave, dependability, integrity, stress tolerance, persistance, and attentive to details

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SECTION 2
Economic sector
The economic sector in which the professional figure was detected: ICT
Seniority level
- Research and develop an IoT application or some tasks in the project (fresher, internship or junior level).

- Research, write pager or build solution for IoT project/application (senior or higher level).

Academic qualification - I level
Candidate graduated Bachelor's degree in Computer Schience or Electronic Engineer. If you interested in IoT, you could study and work in this feild.

Academic qualification - II level
Knowledge algorithm: CNN, RNN, LSTM, GA, Transformer, Reinforment Learning, NLP, Big Data, …   Libraries and frameworks: Tensorflow, PyTorch, Numpy, Sklearn, R, Django, Flask, …   Read and write paper in AI/IoT.

Academic qualification - III level
Candidates study many technical skills, and just focus on a little to good at, according to their position. Almost they study hardly from vendor materials or real projects.

1.14. Solution Consultant

SECTION 1
Name of the professional figure
Solution Consultant
Where it works
Technical Departments, Software Development Departments, R&D Department, Sale Department
The activities
- Work with the customer to identify their IT needs.   - Introduce and advise the customer on feasible IT solutions that are suitable to their needs.   - Work with the technical team to propose IT solutions that are suitable to the customer needs.   - Work with the sale team to prepare cost estimation and payment plans for the customer consideration.   - Work with the sale and technical teams to prepare proposals for tendering.   - Analyse the market to identify market trends.

Qualifications
- Bachelor's degree ICT or business areas. - Experience in presale, software development, marketing is preferred.
Technical skills
- A combination of knowledge in relevant IT solutions and business administration.
Computer and linguistic knowledge
Communication in English at basic level
Personality and availability
- Teamwork and cooperation skills. - Communication skills. - Goal management skills. - Problem solving skills. - Personalities: intitiave, dependability, integrity, stress tolerance, persistance, and attentive to details.
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SECTION 2
Economic sector
The economic sector in which the professional figure was detected: ICT
Seniority level
Senior in software or system, have more experiences in business and solution (senior or higher level).
Academic qualification - I level
Candidate graduated Bachelor's in IT.
Academic qualification - II level
Have some certificates: TOGAF, ITIL, COBIT, CMMI, PMI,…

Academic qualification - III level
Candidates study many technical skills, and just focus on a little to good at, according to their position. Almost they study hardly from vendor materials or real projects.

1.15. Team Leader/ Department Manager

SECTION 1
Name of the professional figure
Team Leader, Manager
Where it works
Technical Departments, Software Development Departments, R&D Department, Qualit Assurance Department, Software Testing
The activities
- Carry out administrative functions. - Plan team activities. - Give direction and guidance to team members. - Coordinate the work of team members. - Coordinate with other teams and departments. - Coach and mentor team members. - Report to the senior management.
Qualifications
- At least Bachelor's degree in ICT. A degree in business and management is an advantage. - Experience is required.
Technical skills
Depending on the technical nature of their teams, a possession of comprehensive knowledge and technical skills in a certain technical field (software, testing, database, security, networking, cloud computing, IT solutions, etc.) is required.
Computer and linguistic knowledge

Good communication in English (or other foreign language such as Japanese, depending on the market of an enterprise)

Personality and availability

- Decide skill
- Critical thinking skill
- Visualization skill
- Teamwork and cooperation skills
- Communication skill
- Goal management and organisation skill
- Problem solving skill
- Negotiation skill
- Leading and motivating skills
- Personalities: intitiave, dependability, integrity, stress tolerance, persistance, and attentive to details

Notes
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SECTION 2

Economic sector
The economic sector in which the professional figure was detected: ICT

Seniority level
Design work and manage task, good at some technical skills (team leader level). Manage human resources, good knowledge in technology or business and management, design and manage works (manager level)

Academic qualification - I level
Candidate graduated Bachelor or Master.

Academic qualification - II level
Strong in soft skills. Good at technical point or business management.

Academic qualification - III level
Candidates study many technical skills, management skill and just focus on a little to good at, according to their position. Almost they study hardly from vendor materials or real projects.

1.16. Project Leader/ Project Manager

SECTION 1
Name of the professional figure
Project Leader, Project Manager
Where it works
Technical Departments, IT Department, Software Development Departments, R&D Department
The activities
- Work with the customer to identify their needs. - Work with the sales and technical teams to develop a proposal for the customer consideration. - Set project goals and develop plans, budgeting estimates to meet those goals. - Maintain project timeframes and status reports. - Manage resources for projects (such as computer equipment and staff). - Coordinate project team members. - Coordinate with related teams and suppliers. - Liaise with the customer for project updating. - Conduct risk assessments for projects.
Qualifications
- At least Bachelor's degree in ICT. A degree in business and management is an advantage. - Experience is required.
Technical skills
- Depending on the technical nature of the project, a possession of comprehensive knowledge and technical skills in a certain technical field (software, testing, database, security, networking, cloud computing, IT solutions, etc.) is required. - Project management skills are also required.

Computer and linguistic knowledge
Good communication in English (or other foreign language such as Japanese, depending on the market of an enterprise)
Personality and availability
- Decide skill - Critical thinking skill - Visualization skill - Teamwork and cooperation skills - Communication skill - Goal management and organisation skill - Problem solving skill - Negotiation skill - Leading and motivating skills - Personalities: intitiave, dependability, integrity, stress tolerance, persistance, and attentive to details
Notes
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SECTION 2
Economic sector
The economic sector in which the professional figure was detected: ICT
Seniority level
Strong at technical - business skill in project and work managent (project leader level). Manage time, plan, resoures and the processes in project (project manager level)
Academic qualification - I level
Candidate graduated Bachelor or Master.
Academic qualification - II level
Strong in soft skills. Good at technical point or business management.

Academic qualification - III level
Candidates study many technical skills, management skill and just focus on a little to good at, according to their position. Almost they study hardly from vendor materials or real projects.