LAB-MOVIE

Labour Market Observatory in Vietnam universities

WP3.1 Analysis of the data from WP2
Hanoi University of Industry

SECTION 1
Name of the professional figure
1. Security analysist
Where it works
ICT enterprises with medium size; IT service enterprise
The activities
Design and propose, implement the security solutions to ensure the information security for IT system.   *Develop, review and support implementing the information security policies, standards and procedures.*   *Manage and configure the security devices: NGFW, WAF to ensure the security for IT systems and endpoints.*   *Implement, manage and monitor information security, analyze the security information and event, correlate to detect the threats, intrusion, data leakage, and report to management as well as immediately remediate the security incidents.*   *Regularly conduct the security vulnerability scanning for the applications, servers, and network devices; propose and follow up with the security findings mitigation plan to ensure the vulnerabilities are fixed on time.*
Qualifications
Bachelor degree in IT security, computer science or other related fields
Technical skills
- Security+ or CEH qualification would be an advantage.   - Strong knowledge of IT Infrastructure components: Firewalls-IPS/IDS, Network and network protocols, Windows (workstations and servers) OS/ Linux, and their security configuration.   - Strong knowledge of and have designed/implemented/operated the security systems: NGFW/WAF/Vulnerability Management/SIEM.   - Good at security incident detection, analysis, and response, especially in emergent situation.   - Good knowledge of web and mobile applications and web/mobile application security.
Computer and linguistic knowledge
Good English skill (written and verbal) is highly preferred

Personality and availability

- Carefulness.

- Communication.
- Work independently and in a team
- Work in a high-pressure job
- High responsibility and enthusiasm, discipline, supportive mindset.
- Accept business trips when required.

Notes
Security analysist is also suitable for senior

SECTION 2

Economic sector
ICT

Seniority level
Entry level

Academic qualification - I level
Bachelor degree in IT security, computer science or other related fields

Academic qualification - II level
…

Academic qualification - III level
…

SECTION 1
Name of the professional figure
2.   Bridge software engineer
Where it works
ICT enterprises with medium size
The activities

- Acting as a bridge between Japanese customers and the project's Offshore team. Working directly with Japanese customers: analyzing project requirements, communicating work content to the project development team in Vietnam.

- Firmly grasp project information, project progress, arising in the project to conduct direct communication with customers
- Planning, monitoring progress, managing project members, reporting project progress to the Board of Directors and customers.
- Working in Vietnam or Japan.

Qualifications
Bachelor degree in Software engineering, Data Science, Computer Science.

Technical skills

- Experience in a BrSE position or equivalent.
- Experience working with at least one of the programming languages: Java/PHP/JS (Nodejs, Vuejs, React Native..)
- Willingness to work out of hours

Computer and linguistic knowledge

- Minimum N2 Japanese.
- Good communication and experience in compiling Japanese documents.

Personality and availability

- Communication

- Persuasion.
- Negotiation
- Understanding Japanese culture and working style is an advantage.

Notes
Bridge software engineer is also suitable for senior

SECTION 2

Economic sector
ICT

Seniority level
Entry level

Academic qualification - I level
Bachelor degree in Software engineering, Data Science, Computer Science

LAB-MOVIE: Labour Market Observatory in Vietnam Universities
609653-EPP-1-2019-1-IT-EPPKA2-CBHE-JP

Co-funded by the
Erasmus+ Programme
of the European Union

Academic qualification - II level
...
Academic qualification - III level
...

SECTION 1
Name of the professional figure
3. DevOps engineer
Where it works
ICT enterprises with medium size
The activities
- DevOps engineers reduce complexity, closing the gap between actions needed to quickly change an application, and the tasks that maintain its reliability.   - Deploy, optimizing, monitoring, analysis the IT system operation   - nfrastructure design ensures scalability, reliability, high availability, performance, security   - Design and maintain monitoring and backup procedures and checklists   - Deploy components for automation test/performance test   - Monitor services and coordinate with development & operation team to handle when a problem happened   - Develop tools to increase visibility and productivity.   - Build production processes, deploy DevOps tools.
Qualifications
Bachelor degrees in Software engineering, Computer Science, Information technology or related fields.
Technical skills
- Proficient in using Linux.   - Knowledge of the technologies and tools used for DevOps.   - Basic knowledge of: Process Management, Threads and Concurrency, Sockets, I/O Management, Virtualization, Memory storage and File systems.   - Knowledge about CI/CD (Jenkins, AWS CD).   - Knowledge about security.
Computer and linguistic knowledge

LAB-MOVIE: Labour Market Observatory in Vietnam Universities
609653-EPP-1-2019-1-IT-EPPKA2-CBHE-JP

Co-funded by the
Erasmus+ Programme
of the European Union

Good English is preferred.
Personality and availability
- Organization.   - Communication   - Listening   - Judgment   - Problem solving   - Teamwork.
Notes
DevOps engineer is also suitable for senior
SECTION 2
Economic sector
ICT
Seniority level
Entry level
Academic qualification - I level
Bachelor degrees in Software engineering, Computer Science, Information technology or related fields.
Academic qualification - II level
…
Academic qualification - III level
…

SECTION 1
Name of the professional figure
4. Business analyst
Where it works
ICT enterprises with medium size; IT service enterprise; Small ICT enterprise
The activities
Work closely with the customer to identify, clarify and analyze 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..

Qualifications
Bachelor's degree in Information Technology, Information System, Data Science Computer Science. Degrees in business areas could be applicable.

Technical skills

- Basic experience in developing or testing software is often required.
- Knowledge of software development process, especially software requirement analysis and modelling languages and tools. Basic knowledge of programming, databases 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
Good English spoken and written is a plus.

Personality and availability

- Communication.
- Analysis.
- Problem solving.
- Decision making.
- Management
- Negotiation and Persuasion

Notes

SECTION 2

Economic sector
ICT

Seniority level
Entry level

Academic qualification - I level
Bachelor's degree in Information Technology, Information System, Data Science Computer Science..

Academic qualification - II level
Degrees in business areas.
Academic qualification - III level
…

SECTION 1
Name of the professional figure
5. Database engineer
Where it works
ICT enterprises with medium size; IT service enterprise; Small ICT enterprise
The activities
- Analyze customer requirements.   - Design data warehouses.   - Develop algorithms to transform data into useful information.   - Create new data validation methods and data analysis tools.
Qualifications
Bachelor's degree in data science, computer science, software engineering.
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.   - Knowledge of cloud computing and data security is a plus.   - An experience in data engineering is often preferred.
Computer and linguistic knowledge
Good English spoken and written is a plus.
Personality and availability
- Critical thinking   - Analytical thinking   - Communication

- Teamworks
- Willingness to work out of hours.

Notes

SECTION 2

Economic sector
ICT

Seniority level
Entry level

Academic qualification - I level
Bachelor's degree in data science, computer science, software engineering

Academic qualification - II level

Academic qualification - III level
…

SECTION 1

Name of the professional figure
6.   ERP deployment engineer

Where it works
ICT enterprises with medium size.

The activities

- Evaluate user requirements for the system.
- Design and provide solutions to the appropriate requirements from users.
- System implementation: training and user training.
- Work directly with the vendor to implement project with the right quality, deadlines and user requirements.
- Do the configuration, perform the testing when a new entity is set up or new function is released.
- Update release strategy when organization structure changes.

Qualifications

Bachelor's degree in an analytical field such as Business, Economics, Psychology, Computer Science, Mathematics, Statistics or Finance.

Technical skills

- Experience in configuration and testing of ERP functions is advantages.

Computer and linguistic knowledge

Good at English writing and speaking skills.

Personality and availability

- Communication
- Consultancy
- Analytical thinking.
- Effective speaking and presenting
- Problem solving
- Ability to explain technical concepts to non-technical employees
- Willingness to work out of hours.

Notes

ERP deployment engineer is also suitable for senior

SECTION 2

Economic sector

ICT

Seniority level

Entry level

Academic qualification - I level

Bachelor's degree in Computer Science.

Academic qualification - II level

Bachelor's degree in an analytical field such as Business, Economics, Statistics or Finance.

Academic qualification - III level

Bachelor's degree in Mathematics,

SECTION 1
Name of the professional figure

7. Multimedia staff
Where it works
ICT enterprises with medium size; IT service enterprise; Small ICT enterprise
The activities
• *Responsible for the successful delivery of creative assets to make the brand powerful from 2D designs (logos, key visual, concept visualization, POSM, website, newsletter …) to the static & motive graphics, videos for various digital/social platforms and ad formats* • *Ensure final graphics and layouts are visually appealing and on-brand.* • *Participate in brainstorming to develop ideas and design direction.* • *Present ideas and designs to the internal team and/ or Client for approval.*
Qualifications
Bachelor's degree or Diploma in Design, Fine Arts, Multimedia engineering or a related field.
Technical skills
• At least 1+ years of experience in Graphic Design is advantages. • Proficient with After Effects, Illustrator and Photoshop. • Ability to edit, compile content, images, sound • Ability to work in a fast-paced setting under tight deadlines.
Computer and linguistic knowledge
Good English communication and reading comprehension is a plus.
Personality and availability
• Good writting • Talented in aesthetics and fine arts • Creativity • Sharp thinking, catching up with trends, creating trends • Diligent, hard working, patient • Eager to learn, hardworking • Synthesize and analyze • Problem solving • Planning
Notes
SECTION 2

Economic sector
ICT
Seniority level
Entry level
Academic qualification - I level
Bachelor's degree in Multimedia engineering or a related field
Academic qualification - II level
Bachelor's degree or Diploma in Design, Fine Arts
Academic qualification - III level
…

SECTION 1
Name of the professional figure
8.   Software tester
Where it works
ICT enterprises with medium size; Small ICT enterprise
The activities
- Reviewing software requirements and preparing test scenarios.   - Creating and executing test cases for the features of new projects / platforms you take responsibility for.   - Creating and executing test scripts.   - Analyzing test results on database impacts, errors or bugs, and usability.   - Preparing reports on all aspects related to the software testing carried out and reporting to the design team.   - Interacting with leaders to understand product requirements.   - Participating in design reviews and providing input on requirements, product design, and potential problems
Qualifications
Bachelor's degree in Software engineering, Computer Science, Information technology or related field.
Technical skills

• *Knowledge of at least one programming language*
• Practical knowledge and experience of test management tools.
• Practical knowledge and experience of defect tracking (QC, Bugzila, Jira…).
• Ability and experience in creating test scripts.
• Up-to-date knowledge of software test design and testing methodologies.
• Experience testing blockchain applications is a plus.
Computer and linguistic knowledge
Good spoken English is preferred.
Personality and availability
• Analytical
• Time management
• Communication
• Good attitude.
• Passion.
• Good organizational skills and detail-oriented mindset.
Notes
SECTION 2
Economic sector
ICT
Seniority level
Entry level
Academic qualification - I level
Bachelor's degree in Software engineering, Computer Science, Information technology or related field.
Academic qualification - II level
Academic qualification - III level
…

SECTION 1

LAB-MOVIE: Labour Market Observatory in Vietnam Universities
609653-EPP-1-2019-1-IT-EPPKA2-CBHE-JP

Co-funded by the
Erasmus+ Programme
of the European Union

LAB-MOVIE
LABOUR MARKET OBSERVATORY
IN VIETNAM UNIVERSITIES

Name of the professional figure
9. Developer

Where it works
ICT enterprises with medium size; IT service enterprise; Small ICT enterprise

The activities

- *Meet customers and analyze customer needs.*
- *Design different pieces of software and let them work together to visualize how the software will work.*
- *Directly work with other departments to pass it on to programmers and coders so that they can develop products more fully. When needing opinions from Software Developer, they still need to be present to convey enough information about the product as well as customer needs that Software Developer wants the product to meet.*
- *Follow up to update or improve product features so that when applying the product into practice, the best effect is achieved.*

Qualifications
Bachelor's degree in Computer Science, especially with Data Structures & Algorithm.

Technical skills

- Programming and writing code.
- Design and organize information.
- Testing the software, ensuring the software runs smoothly and meets the requirements.
- Proficiency in Java, with a good understanding of its ecosystems.
- Basic Understanding of the concepts of MVC (Model-View-Controller) Pattern, JDBC (Java Database Connectivity), and RESTful web services.
- Worked extensively with MySQL, Redis.
- Markup Languages such as XML, JSON.
- Good experience with Linux-based OS.

Computer and linguistic knowledge
Ability to read and understand English documents for work.

Personality and availability

- Communication
- Teamwork
- Patient
- Open thinking
- Problem solving

Co-funded by the
Erasmus+ Programme
of the European Union

LAB-MOVIE: Labour Market Observatory in Vietnam Universities
609653-EPP-1-2019-1-IT-EPPKA2-CBHE-JP

• Responsibility
Notes
SECTION 2
Economic sector
ICT
Seniority level
Entry level
Academic qualification - I level
Bachelor's degree in Computer Science, especially with Data Structures & Algorithm
Academic qualification - II level
Academic qualification - III level
…
SECTION 1
Name of the professional figure
10. Software engineer
Where it works
ICT enterprises with medium size; IT service enterprise; Small ICT enterprise
The activities
• Identify software products, analyze customers' needs or desires for those products to develop or improve or upgrade systems and software in accordance with customer needs.   • Develop and refine models to further develop requirements.   • Design, install, configure, program, and merge data.   • Write manuals for users or partners   • Gather Testers' feedback to fix software bugs if any.
Qualifications

Bachelor or master's degree, major in software engineering, computer science, information technology, mathematics, and data science.

Technical skills

- *Good knowledge of Object-Oriented Programming and one of the languages C/C++, Java, C#, Python, Javascript, ReactJS, Angular, VueJS…*

Computer and linguistic knowledge
English skill should be mid to high.

Personality and availability

- Communication
- Problem solving
- Logical thinking
- Planning, decision making and risk management skills
- Team work and team management skills as well as good guiding and training skills.
- Willingness to work out of hours.

Notes
Software engineer is also suitable for senior

SECTION 2

Economic sector
ICT

Seniority level
Entry level

Academic qualification - I level
Bachelor or master's degree, major in software engineering, computer science, information technology, mathematics, and data science.

Academic qualification - II level

Academic qualification - III level
…

SECTION 1
Name of the professional figure

11. Electronics and Telecommunication engineer
Where it works
IT service enterprise
The activities
• Test and install voice, data communications, internet networks, wireless network. • Test and implement new products and services. • Configure networks and interconnected systems • Identify and solve issues with current network systems. • Monitor systems and identify needs for upgrades and enhancements.
Qualifications
Bachelor's degree in Electronic Engineering / Telecommunication, Computer science, Software Engineering
Technical skills
• Knowledge of telecommunications systems such as mobile networks, telecommunication system, TCP/IP, radio transmission protocols. • Knowledge of software for designing telecom networks and systems.
Computer and linguistic knowledge
English is advantage..
Personality and availability
• *Team work.* • Responsibility. • Analytical thinking. • Willingness to travel. • Willingness to work out of hours
Notes
SECTION 2
Economic sector
ICT
Seniority level
Entry level

Academic qualification - I level
Bachelor's degree in Electronic Engineering / Telecommunication, Computer science, Software Engineering

Academic qualification - II level

Academic qualification - III level
…

SECTION 1
Name of the professional figure
12. IT project manager
Where it works
ICT enterprises with medium size; IT service enterprise
The activities

- Manage assigned IT projects to ensure adherence to budget, schedule, and scope of project.
- Develop, maintain, and revise proposals for assigned projects including project objectives, technologies, systems, information specifications, timelines, funding, and staffing.
- Set and track project milestones; manage and account for unforeseen delays, then realign schedules and expectations as needed.
- Establish and implement project communication plans, providing status updates to affected staff and stakeholders.
- Collect, analyze , and summarize information and trend as needed to prepare project status reports.
- Perform other related duties as assigned

Qualifications
Bachelor's degree in Computer or Information Science-related field required; Master's degree preferred.
Technical skills

- Knowledge of Unified Modeling Language is essential.

- Experience with one or more programming languages: PHP, Python, JavaScript, Nodejs, C#, Java…, coding in RDBMS, NoSQL (MySql/MariaDB, PostgreSql, SQL Server, Redis, MongoDB, Cassandra, ES.
- *Manage software development practices in a collaborative and agile fashion. This takes hard skills, such as creating an efficient DevOps environment, and soft skills, to keep development and operations teams aligned. At least three years of related experience required.*
- *Thorough understanding of project management principles and planning.*
- *Thorough understanding of information technology procedures and practices.*
- *Proficient with, or able to quickly become proficient with, a range of general and specialized applications, software, and hardware used in the organization and the industry.*
- The ability to motivate teams to complete a project in a timely manner.

Computer and linguistic knowledge
Good English verbal and written.

Personality and availability
- Leadership   - Organization and planning.   - Excellent analytical thinking   - Logical thinking.   - Problem-solving.

Notes

SECTION 2

Economic sector
ICT

Seniority level
Manager level

Academic qualification - I level
Bachelor's degree in Computer or Information Science-related field required.

Academic qualification - II level
Master degree in Computer or Information Science-related field required

Academic qualification - III level

...

SECTION 1
Name of the professional figure
13. Software architecture
Where it works
ICT enterprises with medium size
The activities
• Working with customers to clarify and document platform requirements/specs (functional and non-functional). • Accountable for defining & creating platform architecture model using modern software architecture, design patterns and solutions for high performance, high scalability, high availability, security, integrability and maintainability. • Working with development team to implement platform core services/base framework. Provide and mentor platform architecture design documentation, coding standards, implementation guidelines, 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.
Qualifications
B*achelor's degree in Software Engineering,* Data Science*, Computer Science, Information Technology. Master degree is an advantage.*
Technical skills
• Knowledge of Unified Modeling Language is essential. • Experience with one or more programming languages: PHP, Python, JavaScript, Nodejs, C#, Java…, coding in RDBMS, NoSQL (MySql/MariaDB, PostgreSql, SQL Server, Redis, MongoDB, Cassandra, ES. • *Manage software development practices in a collaborative and agile fashion. This takes hard skills, such as creating an efficient DevOps environment, and soft skills, to keep development and operations teams aligned.*
Computer and linguistic knowledge
Good written and spoken English is preferred.
Personality and availability

- Leaderships
- Problem-solving and conflict resolution
- Communication
- Coaching and Inspiration
- Organization
- Prioritizing
- Detailed thinking
- Creative thinking

Notes

SECTION 2
Economic sector
ICT
Seniority level
Manager level
Academic qualification - I level
B*achelor's degree in Software Engineering,* Data Science*, Computer Science, Information Technology.*
Academic qualification - II level
Master degree in Software Engineering, Data Science*, Computer Science, Information Technology*
Academic qualification - III level
…

SECTION 1
Name of the professional figure
14. IT manager
Where it works
ICT enterprises with medium size; IT service enterprise
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

Bachelor's degree in ICT. A degree in business and management is an advantage.

Technical skills

- Expert knowledge of information technology, policies and regulations in the field of Information Technology.
- 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.
- Sensitive to system anomalies to manage risks when the system crashes.

Computer and linguistic knowledge

Spoken English.

Personality and availability

- Communication
- Negotiation
- Organization

Notes

SECTION 2

Economic sector

ICT

Seniority level

Manager level

Academic qualification - I level

Bachelor's degree in ICT.

Academic qualification - II level
A degree in business and management is an advantage.

Academic qualification - III level
…

SECTION 1
Name of the professional figure
15. Software test leader
Where it works
ICT enterprises with medium size.
The activities
- Building up and leading the Testing Team to the success of project   - Develop test strategy and test plans for projects   - Defining the scope of testing within the context of each release or each software testing level   - The use of resources in an effective way and managing the resources for software testing.   - Applying the appropriate test measurements and metrics in the product and the Testing Team.   - Planning, deploying and managing the testing effort for any given engagement.   - Identify and resolve the project risks in testing team   - Improve testing process.   - Reports to the upper management.
Qualifications
Bachelor's degree in software engineering, computer science, information technology engineering, related field or equivalent practical experience.
Technical skills
- More than 5 years of experience in the creation and automation of SW tests (eg. regression, functionality/non-functionality, and API)   - Knowledge on the Python and testing tools: debug tools, CI/CD tools, test automaton framework.   - Understanding for developer testing and agile testing.
Computer and linguistic knowledge

- Good communication
- The technical communication with the collaborating scrum teams.

Personality and availability
- Attention to detail   - Analytical thinking   - Flexibility   - Leadership   - Communication   - Quality assurance
Notes
SECTION 2
Economic sector
ICT
Seniority level
Manager level
Academic qualification - I level
Bachelor's degree in software engineering, computer science, information technology engineering, related field or equivalent practical experience.
Academic qualification - II level
Academic qualification - III level
…

SECTION 1
Name of the professional figure
16. Technical manager
Where it works
ICT enterprises with medium size; IT service enterprise

LAB-MOVIE: Labour Market Observatory in Vietnam Universities
609653-EPP-1-2019-1-IT-EPPKA2-CBHE-JP

Co-funded by the
Erasmus+ Programme
of the European Union

The activities
Manage professional and technical issues in the business   *Human resource management in the department*   *Consulting and advising on technical issues for the Board of Directors*.   - P*roposing and recommending new and suitable technical technologies for enterprises.*   *Assist the board of directors in making technical selection decisions.*
Qualifications
B*achelor's degree in computer science / engineering or equivalent practical experience.*
Technical skills
- More than 5 years of experience   - Depend on technical majors, it requires deep specific knowledge.
Computer and linguistic knowledge
- Good communication   - The technical communication with the collaborating scrum teams.
Personality and availability
- Leadership   - Acquiring new knowledge, accumulating more experience during working time.   - Time management   - Communication   - Active listening   - Logical and creative thinking   - Effective speaking.   - Good and effective decision making   - Good cooperation and teamwork
Notes
SECTION 2
Economic sector
ICT
Seniority level
Manager level
Academic qualification - I level

B*achelor's degree in computer science / engineering or equivalent practical experience.*
Academic qualification - II level
Academic qualification - III level
…