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Part I: General Information			
Function / Job Title:	**Software Engineer**		
Location of role (City & Street):	**Wroclaw, GDB**	**Department:**	**TSRD, Market Risk IT**
Full / part time (Work %):	**full**		
Travel % if applicable:	**no**		
Is working from home possible:	**Yes, up to 40% of work time**		

Part II: Job Description

Overview of business area or project:

TSRD is one of the key systems calculating various Market Risk levels for the bank.
The primary goal of the TSRD team is to provide downstream applications with the highest quality Time Series data.

Primary functions provided by TSRD:

Daily sourcing of time-series data from various disparate data sources
Automated and rule-based cleansing of all time-series data exceptions on a daily basis
Automation of End User Calculations (EUC) used to derive complex synthetic time series
Exposure of the sourced and synthesized data to the downstream systems

Projects we're currently working on:

Performance optimizations in the heaviest and most sophisticated calculations being performed by the TSRD (in particular: further extensions and leveraging of our clustered architecture);
Decreasing *time to market* for the requirements coming our way by introducing several deep architectural changes (e.g. modularization towards more service-oriented architecture, post-deployment regression testing tooling etc.) **;**
Implementation of the changes required by the bank-wide **CCAR** (Comprehensive Capital Analysis and Review): in particular: new complicated data sources to be introduced, several new calculations to be implemented at TSRD end using our DSL;
onboarding of the new Time Series types: implementation of the complex workflow governed by lots of sophisticated business rules; plenty of data to be processed efficiently.

Key Responsibilities

- Writes high quality Object-Oriented and computationally efficient code
- Performs meticulous and valuable code reviews for the other team peers
- Is a mentor for the younger and less experienced members of the team (the primary point of contact in case of technical issues)
- Is able to prepare a technical design for the bigger functionality / project and break it down into manageable tasks
- Is able to coordinate effectively the work of the other team members

What kind of programmers are we looking for ?

You have a keen interest in programming. You treasure evenings spent cracking new technologies or polishing a pet project of yours and you tend to do it quite frequently. You strive to be up-to-date with the 'latest and greatest' technology but you understand that deep down what really makes you a great programmer is

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diligence, attention to detail and integrity - the basics of any true craftsman.

You know at least the basics of the computer science. You may not be an expert in big O notation type problems or sophisticated data structures but you certainly understand the fundamentals. e.g. what hash maps and trees have been created for and why it is not such a good idea to sort arrays in a bubble-like way. With the amount of data we need to process in TSRD this kind of knowledge constantly pays off.

You are well aware of the fact that what one thread / process can do in 10 hours, 10 threads / processors working in parallel could possibly do in 1 hour (and you know how to make it happen in Java !), but you also appreciate that hardware resources are almost inevitably always scarce, so before scaling up or out you always ensure that you have a carefully crafted and optimized algorithm for your problem at hand.

You agree that modern systems should be written to be Reactive and you may even have heard about The Reactive Manifesto. You understand the trade-offs between asynchronous and synchronous solutions and you feel comfortable working with both of them.
Most people do not like to be interrupted with a critical production issue from a poorly known area of an application which needs to be solved ASAP but if such a need arises and it is your turn to take care of it you are by no means intimidated. On the contrary - you realize that this is the quickest way to learn the application and earn some respect from your peers.

You like people and you love working with them! Great software rarely is written alone, so you are not shy of reaching out to your peers for any information or help you may need and you are more than happy to share such knowledge yourself. You are proud of your work but nevertheless you welcome your team members' feedback. You are not defensive and are always willing to question the assumptions underpinning your design or implementation in an articulate, well-mannered way.

You perceive it to be a joyful challenge to work in sophisticated business domains with complex rules, non-trivial constraints and a large amount of data to be processed efficiently - as we do in TSRD. You are excited with all the fancy buzz-words flying around (as we all are !) and about the tools/technologies that you can learn and use in your daily job. However you are well aware that at end of the day they are just tools and the deepest satisfaction you can derive is actually from serving the business you are working for.

Overview of the department / team (team size, backgrounds, personalities …):

Around 27 in Poland, around 70 globally; cooperation with other countries: mostly London and to some extend Bangalore.

Challenges Contractor will be facing in this role:

Complex business domain to master;
Sizeable chunks of data to be processed in an efficient way (scalability is of paramount importance in TSRD !)

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Essentials Skills and Qualifications:

1. **Proficiency in Java, at least 7**
2. **Understanding of highly concurrent, distributed systems**
3. **Deep understanding of the Object Oriented Design and SOLID principles**
4. **The sense of craftsmanship and attention to details (always performs end-to-end, integration, unit and performance tests, is responsible for her / his code and functionality; always striving to complete the tasks given according to the best industry standards)**
5. **Integrity: is honest and not defensive**
6. **He communicates effectively in English (to the level of being able to easily discuss complex technical issues and defend her / his own point of view)**

Desired Skills and Qualifications:

1. **Working knowledge in the following technologies: Spring (or any other DI framework), JMS & MDB (or any other messaging system) (HUGE ADVANTAGE)**
2. **Experience in working with J2EE application servers (e.g. Weblogic, JBoss, Websphere etc.)**
3. **Familiarity with the programming paradigms like Domain Driven Design, Reactive programming**

Candidate Value Proposition:

The amount of data we need to process every day is substantial, so the ubiquitous paradigms we employ are *asynchronous and distributed processing***.** We use *Continuous Integration*, *static code analysis* and we have automated all the tasks related to deployment and code repository.