Jane Ivanova

Lead Integration Engineer

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PROFILE SUMMARY

Integration engineer and architect with good knowledge of modern technologies and broad programming experience. Ninja in Salesforce and SAP integration. Has drive to research and develop complex systems. Passionate about robotics and AI. Find comfortable working independently as well as working in group, feel confident in leading others and take roles as integration analyst / architect / engineer.

7+ years:	**Software Development Life Cycle (SDLC)**;
5+ years:	**Integration engineering**: web services development and configuration, **cloud/on-demand/hybrid** integration platforms, SOA, microservices and APIs-led architectures;
3+ years:	**Salesforce** bi-directional integration: REST/SOAP APIs, custom web services development**. Java/Apex** development;
2+ year:	Leading **Mulesoft Integration** expertise. **Java/Data Weave** development;
2 years:	Leading **Informatica Cloud Data Integration** expertise;
2 years:	**SAP XI/PI/PO** design/implementation of integration solutions. **Java** development;
2 years:	**SAP R/3 ABAP** development;
3 years:	**Lead of a team** of 5 people;

EDUCATION

Moscow Institute of Physics and Technology (MIPT)

BS, Applied Physics and Applied Mathematics

ADDITIONAL EDUCATION

- **MuleSoft Certified Developer – Level I (Mule 4)**
- **Cryptography** (Stanford University – online course)
- **Java SE 7 Programmer: Oracle Certified Professional** (Certificate)
- **Java SE 7 Programmer: Oracle Certified Associate** (Certificate)
- **Algorithms, Theory, and Machines** (Princeton University – online course)
- **Algorithms, Part I, II** (Princeton University – online courses)
- **Analysis of Algorithms** (Princeton University – online course)
- **Fundamentals of Digital Image and Video Processing** (Northw. Un. - on.c.)
- **Practical Reinforcement Learning** (NRU Higher School of Econ. – on.c.)

SKILLS

Leadership	* * * *
Java	* * *
Apex	* * *
JavaScript	* *
PL/SQL	* *
C/C++	*
Python	*
Anypoint Mulesoft	* * * *
Informatica Cloud	* * * *
SAP XI/PI/PO	* * * *
SAP HCI	* *
Zapier	* * *
Salesforce	* * * *
SAP CRM/ERP	* * * *
Node.js	* *
Arduino	* *
Raspberry Pi	* *

CHARACTER

- Soccer player, captain and coach (awards received)
- Robotics enthusiast
- Dare-to-try person
- Cyber-punk and Sci-Fi fan
- Arch Linux user
- Musician

KEYWORDS

Integration | java | web services | R&D | lead | cloud | AI | machine learning

RECENT ACADEMIC PROJECTS

ASU, Statistical Machine Learning Projects — Aug' 2020 – Oct' 2020

CSE 575 Statistical Machine Learning. Individual projects.

Gaussian Naive Bayes Classifier

I've implemented Gaussian Naive Bayes classifier to classify handwritten digits from MNIST database using average of all image pixels brightness values as the first feature and a standard deviation of all image pixel brightness values as a second feature.. Prediction accuracy for '0' – 92%.

K-Means Clustering

I've implemented k-mean clustering algorithm on the set of 2500 dots allocated widely in 2 variations, and using euclidean distance in comparison. The first variation selects initial centroids randomly from the given dots, and the second variation selects one centroid randomly and others the most distant to the selected before. On a range of k (number of centroids) from 2 to 10, the second strategy was observed to give less loss.

Classification Using Neural Networks and Deep Learning

I've implemented and trained Convocational Neural Network to classify handwritten digits from MNIST database. Initial structure with convolutional layer, maxpooling and 2fully connected layers gave accuracy 82% for '0'. After adding 3 more convolutional layers and maxpooling, changing normalization and activation functions the accuracy reached 98%. Further research has shown that data augmentation would increase accuracy to 99-100%.

Grade received: A
Environment: Python, Google CoLab.

ASU, Visual American Sign Language Classifier — Jan' 2020 – Mar' 2020

CSE 535 Mobile Computing. Group project.

The project implemented a combinatorial model Edge+Fog enabling an application for ASL classification. Through its UI it allowed user to learn ASL signs, captured user's hands gestures via smartphone's camera and learned to classify ASL signs shown using ML. The model shown the impact of certain features of gestures on the signs prediction accuracy. Adding these features to the model allowed to increase the accuracy of signs prediction from 16% to 82%. Android smartphone took role of an edge device, and the Flask service was used as a fog.

Grade received: A
Environment: TensorFlow's PoseNet, Java, Python, Flask, Android Studio, Pixel, Google CoLab.

ASU, 3 Projects with Neural Networks Application — Oct' 2019 – Dec' 2019

CSE-571. Artificial Intelligence. Individual projects

Neural Network for Collision Prediction

The project addressed a very common task in mobile robotic devices to predict collisions in the surrounding environment. The model environment consisted of limited space with obstacles and walls, and the agent possessed 5 sensors to read distances to the nearest obstacles in different directions. As a goal of the project the neural network was trained to predict collisions with the obstacles based on the sensors readings with accuracy more than 97%.

Tools for Sequential Decision-Making

The project supplemented the prediction mechanisms of mobile robotic device with the decision-making functionality and served a demonstration of approaches to path-finding task. The simulated environment

consisted of the agent (Pacman) and a maze with walls and food. Based on propositional fragments of the maze the planning system executed greedy best-first search algorithm to find the shortest path to the target in the maze completing assigned tasks.

Bayesian Networks

The project modeled and implemented solutions for several situations under uncertainty which in real world are often hard to figure out for human experts. One of the significant solutions delivered probabilistic diagnosis for a disease symptom and proposed possibilities for illness.

Grade received : A
Environment: Python, PDDL (Planning Domain Definition Lang.), PyCharm, FastDownward Planner.

ASU, 3 Projects with Cryptography Application — Aug' 2019 – Oct' 2019

CSE-539. Applied Cryptography. Individual projects

Block Encryption and Attack with Cryptoanalysis Method

The project implemented encryption algorithm under specific requirements to encrypt a multimedia file with 32- and 64-bit key. As a proof of a lack of security of 32-bit key the project implemented brute-forcing attack on the 32-bit encryption key.

For the file encrypted with the 64-bit key block encryption provided the project implemented an algorithm analysis and developed an attack on the cypher text using cryptoanalysis of the content.

Rainbow Table Attack

The project illustrated the common in the real world situation of passwords database leak and why despite hashing this information can still be used by adversaries. In the project the rainbow table attack has been implemented on 32- and 64-bit hashes provided for passwords of 4-symbols.

Encryption with MAC

The project implemented a hash-based message authentication algorithm under specific requirements to encrypt and decrypt 1024-byte files.

Grade received: A
Environment: C, CLion.

NON-COMMERCIAL PROJECT

Distributed AI Enabled Resource Restricted Systems — Mar' 2019 – Present

R&D in areas of applied AI and distributed systems.

Research objectives:

- Building and navigation 2D and 3D map with objects placement using a decentralised network of distributed mobile sources with camera and some amount of calculation capability;
- Framework for a system of cooperative home assistants;
- Distributed anytime algorithm for training objects classifier;

Environment: Java, C++, Python, OpenCV, Gradle, IntelliJ IDEA, Raspberry Pi 3/4, Ubuntu Server, gcc, Google Colab.

PROFESSIONAL EXPERIENCE

Mentor Graphics (Siemens Business), OR, USA — May' 2020 – Present

Full-time contractor, Senior Mulesoft Developer

After successful launch of a previous phase, Mentor Graphics, now the merged business, actively grows and I was invited to build the new integration interfaces and to extend development of a framework I built earlier. I added functionality for different statuses processing, error management, various data validations and a tool for massive loads. I'm extending this framework now for different other business entities and new operations.

Responsibilities:

- Design integration scenarios and flows for business flows being developed;
- Design sequence diagrams, protocols and data structures for integration scenarios;
- Analyse SAP data structures and eliminate structures discrepancy in APIs developed;
- Design and develop schema in Oracle database for intermediate purposes in complex integration scenarios;
- Develop Mulesoft applications according to the best practices established;
- Assist Mulesoft Architect in designing integration solution and best practices;
- Perform manual functional testing and report with examples in SoapUI projects;
- Configure security policies for Mulesoft applications;
- Describe Mulesoft applications on Anypoint Exchange with examples;
- Configure connectivity and troubleshoot issues;

Achievements:

- Improved performance of critical customer services interfaces: eliminated timeout errors and reduced response time from 15 mins to 5 secs by improving the algorithm of data transformation;
- Revised and improved stability of integration interfaces by designing and implementing common and corner cases strategies along the APIs;

Environment: DataWeave 2.0, Java, Mulesoft ESB, Mulesoft Anypoint, SAP CRM, SAP ERP, SAP SNC, SAP Idocs, Salesforce, Rabbit MQ, Oracle Database, custom web-services, Jenkins, Maven, SoapUI;

Mentor Graphics (Siemens Business), OR, USA — Jul' 2019 – Oct' 2019

Full-time contractor, Senior Mulesoft Developer

Mentor Graphics is a electronic design automation company and was acquired by Siemens. Dictated by this event it required merging of their existing systems landscapes. Working intensively with the teams of both sides I've designed a set of new integration flows for the combined business processes in a merged landscape. Due to the complex dependencies for certain business entities I've developed the process orchestration framework with passive waiting of steps execution in various systems. I provided the onsite support during the intensive phase of development and launch.

Responsibilities:

- Analyse business needs and communicate with business analysts and technical teams of the systems;
- Design integration scenarios and flows for business flows being developed;
- Design sequence diagrams, protocols and data structures for integration scenarios;
- Analyse SAP data structures and eliminate structures discrepancy in APIs developed;
- Design and develop schema in Oracle database for intermediate purposes in complex integration scenarios;
- Develop and present PoC on solution being proposed;
- Develop Mulesoft applications according to the best practices established;
- Review code and assist other team members on Mulesoft platform and its setup;

- Mentor intern and junior developers;
- Assist Mulesoft Architect in designing integration solution and best practices;
- Design Jenkins jobs for automated deployment;
- Perform manual functional testing and report with examples in SoapUI projects;
- Configure security policies for Mulesoft applications;
- Describe Mulesoft applications on Anypoint Exchange with examples;
- Configure connectivity and troubleshoot issues;

Achievements:

- Helped the client to reach the functionality milestone in spite of being behind the schedule before my involvement in the project;
- Helped the client to ease difficulties in system integrations after recent acquisition by working thoroughly with business and technical representatives of the systems involved and introducing integration solution that meets all their functional and technical requirements;

Environment: DataWeave 2.0, Java, Mulesoft ESB, Mulesoft Anypoint, SAP CRM, SAP ERP, SAP SNC, SAP IDocs, Rabbit MQ, Oracle Database, custom web-services, Jenkins, Maven, SoapUI;

FundCount, MA, USA — Apr' 2019 – Nov' 2019

Part-time contractor, Lead Integration Engineer

FundCount is a small product company in fintech which recently grew their clients base extensively and required introduction of a new level of integration. They invited me to research options for their product development, and develop those options that would let them launch a new product feature for their clients. I provided detailed analysis of existing technologies and possible approaches and integration patterns. I developed several flows, a prototype project, and established a workflow for sustainable future development by the developers to take over the support of this feature.

Responsibilities:

- Research integration capabilities of range of systems and their functionality to solve a set of business tasks;
- Research and present analysis report of different integration platforms from the perspective of the given business and technical tasks;
- Analyse pros and cons of integration architectures and build PoC with chosen options and systems;
- Hold functionality demonstration sessions and present solutions optimality analysis;
- Develop API web-services on Java in the system;
- Develop NodeJS application and modules on Zapier platform for integration of the company's product with external systems and services;
- Develop functional and integration test-classes for manual and automated testing;
- Develop Zaps on Zapier platform;
- Communicate with Zapier support team on features entablement and partnership engagement;
- Supply API specification with examples and support manual testers with guidance on new functionality;
- Review, rebase and squash the code after development is done;
- Design and establish the workflow for development lifecycle on Zapier platform;
- Design gradle tasks for development, testing and deployment of development on Zapier platform;
- Design Jenkins job for automated compilation and testing of development on Zapier platform;

Achievements:

- Developed a prototype of a new product feature for text recognition (OCR) on the scanned reports images and data extraction into excel form;
- Increased company's market competitiveness by adding new highly demanded integration features to the product;

- Opened new opportunities for the company's product and increased company's market competitiveness by having developed set of integration solutions, templates and best practices with popular cloud systems;
- Increased company's clients satisfactory by addressing most common questions and troubleshooting cases with detail user manuals and how-to materials;

Environment: Java, JavaScript, Tesseract-OCR, FundCount, Zapier, Salesofrce, HubSpot CRM, Box, MS Dynamics 365, Google Drive, Gmail, DocParser, Approval Donkey, Payment Rails, Docker, Gradle, Jenkins;

CT Consulting (Customertimes Inc.), Moscow, Russia. 2017 – 2019

Lead Salesforce Integration Specialist / Team Lead

I was invited to lead international integration projects at consultancy company CT Consulting in pharmaceutical, retail, and ecommerce industries, integrating Salesforce with SAP and other cloud and on-premise systems. On the projects I took several roles: **Integration Architect / Mulesoft Developer / System Analyst / Scrum Product Owner**.

Responsibilities:

- Analyze business objectives and needs, and understand systems functional gaps;
- Provide consultation on Salesforce and integration platforms for the best fit;
- Conduct meetings with business representatives to clarify and follow-up requirements, data flows and points of integration;
- Conduct meetings with technical teams to align and specify data flows and integration contracts;
- Prepare scope of work description and its estimation;
- Prepare product features, user stories and functional requirements descriptions;
- Model data structures, maintain data dictionaries and transformation mapping, design and build data flows;
- Compile solution architecture, concept design, data flows specifications and sequence diagrams;
- Formulate and manage tasks among other team members;
- Deliver the integration implementation in Salesforce and integration platforms of clients' choice;
- Develop integration modules/services in Salesforce;
- Develop POC (proof of concept) in Salesforce and Mulesoft;
- Work tightly and coordinate with customers' in-house development teams;
- Lead development sprints and manage functional and integration tests;
- Hire and mentor junior team members;
- Manage escalation, cut-over preparation, go-live support;
- Hold knowledge transfer sessions and ensure customer's success and satisfaction;
- Manage in-company's integration team, conduct interviews and performance reviews;

Achievements within the company's clients:

- Shortened delivery time to homecare patients orders across different countries by improving the automated integration for Healthcare systems;
- Decreased participants' travel time by 90% by delivering an automated integration;
- Helped the client to successfully perform the full-set migration of complex legacy system jungle into 4 new clean and transparent business units instances with now-independent functionality;

Environment: Salesforce Apex, Java, Salesforce, Informatica Cloud, Anypoint Mulesoft, Talend, Jitterbit, SAP CRM, SAP BW;

Masterdata, Moscow, Russia. 2015 – 2017

Senior Integration Consultant

After working on several integration projects at Masterdata I acquired certifications in SAP and Informatica solutions and was assigned to the integration department as a senior consultant. I continued consulting company's clients and

delivering integration solutions now in an extended role of **SAP PI/PO Consultant/Developer** / **System Analyst** / **Informatica Cloud Developer**.

Achievements within the company's clients:

- Resolved encoding incompatibility between Oracle database and SAP CRM by developing customizable and reusable Java-module for SAP PI HTTP Adapter;
- Resolved connectivity issue between Apache server and SAP CRM by developing customizable and reusable Java-mapping for SAP PI HTTP Adapter;
- Resolved memory leak by developing shell-script on AIX system for zipping and transferring heavy files to SFTP;

Environment: Java, SAP ABAP, AIX bash, SAP PI/PO, SAP XI&ccBPM, SAP HCI, SAP CRM, SAP ERP, Informatica Cloud, Salesforce;

Masterdata, Moscow, Russia. 2013 – 2015

SAP ABAP Developer

I worked for consultancy company Masterdata, main local SAP CRM reseller, consulted company's clients and delivered SAP CRM solutions in role of **SAP ABAP Developer**.

Achievements within the company's clients:

- Dropped processing time of batch jobs by 40% on average by refactoring code and introducing wise indexing in tables;
- Improved maintainability of the legacy integration solution with more than 200 points of integration and 30 ccBPM processes. Migrated the business logic from ccBPM processes to SAP CRM, designed a customizable solution with reduced complexity and condensed control for the CRM users;
- Improved quality and sped up technical support delivery by developing several utility programs

Environment: SAP ABAP, SAP CRM, SAP XI&ccBPM;