Lukasz Tymoszczuk

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I'm a Scala / Data Engineer with over ten years' experience. I inspire and help teams in being productive. I love mathematics and algorithms.

I'm goal oriented, proactive and able to work remotely, with outstanding communications skills.

My business domain: Machine Learning (2018), Finance, Risk Management FRTB, MIFID, Basel: 5 years (2008 - 2010, 2013 - 2015, 2018), Energy industry: Energy price forecasting (2017), Public sector: Automatic recruitment (2016), Airline (2010 - 2013).

Info:

- github.com/lukastymo
- stackoverflow.com/users/574799/smas (top 2%)
- codeforces.com/profile/smas

Technical experience:

- Scala, Functional Programming, Java, JVM
- Agile Development practices: CI/CD, TDD, PP, Code Review
- Machine Learning, Python / Jupyter Notebook
- Big Data: Apache Spark (development and tuning), ETL, SQL
- Distributed Systems: Akka, Microservices, NoSQL, The Twelve-Factor App
- DevOps & Cloud: AWS, Google Cloud Platform, Azure, Ansible, Terraform, Docker and Kubernetese, ELK

Data Engineer (contract)

Royal Mail / GBI May 2018 – Present, London, UK

- I was part of Data Engineering team. I developed Data Platform and data algorithms on it which transformed the whole business and allowed releasing multiple great products. I advised and recommended best practices in Scala, Agile and Software Development, Architecture.

- I implemented opt-1, opt-2 and opt-3 heuristic to solve VRP (Vehicle routing problem). This algorithm was essential for Royal Mail business, as it is unpractical to solve this task manually. Thanks to this algorithm another project "Late Arrival Packages" was able to kick off.

- I developed parcel delivery project which processed terabytes of data in a few hours. I was responsible for productionizing (porting from POC Python code to Scala) and implemented new features for Machine Learning modules: Train, Test, Post-process and Formatter. This project was able to predict 90% of all packages UK-wide with 2-hour precision.

Tech stack:

- Scala, Apache Spark, Spark SQL, Yarn, HDFS, Linux, Apache Zeppelin, Python, TDD
- Kubernetes, Docker, Akka-HTTP, MongoDB, Cats
- On-premise Cloud
- REST, swagger, gatling, postman

Big Data Developer (contract)

IHS Markit / Risk Factor Utility (FRTB) September 2017 – May 2018, London, UK

- I was part of the team which implemented very popular, and in-demand project required transforming significant amount of raw market data into FRTB-compliant risk factors and scenarios by using DSL language for risk modelling.

- I productionized Spark application on AWS (S3, EC2, EMR) with strong automatization requirement via Ansible and CloudFormation. Due to this change deployment across environments was consistent and automated so everybody on the team could do this by clicking one button in Jenkins.

- I helped developing functional Scala project, which the main module was a custom DSL language used by Quants. Thanks to this feature our quants were able to produce FRTB solutions presented for multiple banks.

Tech stack:

- TDD, Code review, Scrum team
- Scala + cats library, Monix, Low-level Scala for DSL creation: Reflection, Sandbox
- REST and Swagger
- Apache Spark, Hadoop, Cassandra
- AWS (EC2, S3), Cloud Computing, EMR, Yarn
- Apache Zeppelin, Big Data, Helping BAs with notebooks written in Python
- Agile: Scrum
- CI / CD, Ansible, Git workflow

Software Engineer (contract)

OVO Energy | vCharge April 2017 – September 2017, London, UK

- vCharge was a startup acquired by Ovo Energy. The idea was to control storage heaters installed in people homes. I worked with the owner who was located in the US (~ daily one-to-one online meetings). I had a high impact on stakeholders. Throughout a couple of months, I was the only Scala developer.

- I built a module to forecasting Energy prices using the Dijkstra algorithm and mathematical model created by Data Scientists. It allowed buying energy cheaper and "store" in the customers' storage heaters.

Tech Stack:

- Scala, Akka, Play Framework, Lagom Framework
- Python, C++
- CQRS / Event Sourcing, Cassandra
- Microservices
- ScalaTest, Property-based testing

Scala Consultant (contract)

Civil Service Resourcing (Valtech) | Faststream, Fasttrack February 2016 – April 2017, London, UK

- I developed an auto-grader module inside the web-based application deployed on HMRC's Tax Platform. The module allowed to assess and send emails to 120,000 candidates in a day-scale vs month-scale in the legacy system.

Tech stack:

- Scala and functional design
- Play framework, RESTful API, MongoDB
- Microservices, Kibana, Grafana
- Cucumber, ScalaTest, Property-based testing

Senior Software Engineer

Monitise | FinKit platform, Matm August 2013 – February 2016, London, UK

- After a year of developing OSGI, Java platform for multiple financial institutions I was moved to brand new cloud platform with Scala, Akka, Microservice architectures: FinKit.

Tech stack:

- Scala, Akka
- REST: Spray, Swagger (generator)
- IBM Bluemix, NoSQL: Cloudant, AMQP protocol
- Java 6 / 7, Apache Camel
- Modularization: OSGi, Messaging: JMS
- REST, SOAP, SOA
- TDD, BDD, Continuous Delivery, Continuous Integration

Full stack Java Developer

Sabre Holdings November 2010 – August 2013, Krakow, Poland

- I helped in developing web-based, highly configurable booking application for numerous airlines.

- I proposed and implemented speeding up development by recording a web state to disk. A tester could persist the current state of the application, and a developer could retrieve it at any time, at any moment – saving time and reproducing some nasty bugs in a second.

Tech stack:

- Java 5 / 6
- Spring Core, MVC, Webflow
- JavaScript, JSP
- TDD, Continuous Integration, Object-Oriented Programming, SOLID

Full stack Java Developer

ComArch June 2008 – November 2010, Krakow, Poland

Tech stack:

- Research: Comparing AJAX JSF frameworks: ICEfaces vs RichFaces
- Tomcat & Websphere
- Java 5 / 6, JSF, Portlets, JavaScript, AJAX

Education

M.S., Computer Science, Jagiellonian University, 2005 - 2010, Krakow, Poland

- Diploma dissertation: Comparing JSF frameworks: ICEfaces and RichFaces

Projects

- appointary.com
- stepstoyourhome.co.uk
- www.lukastymo.com/inc/blog