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George Leontiev

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Education

2004–2008 **Bachelor**, *National Taras Shevchenko University of Kyiv*, Kyiv, Faculty of cybernetics.
chair of theory and technology of programming

2008–2010 **Master**, *National University of "Kyiv-Mohyla Academy"*, Kyiv, Computer science faculty.
chair of the automated systems software development

Experience

Vocational

02.2014–present **Backend Developer**, *SoundCloud Inc.*, Berlin.

01.2013–01.2014 **Quantitative Developer**, *deltamentod GmbH*, Berlin.
Working on the backend for recommendation service.
Developing a recommendation system for improving online ads/ad compaigns, predicting their sucess, suggesting possible improvements. Using machine learning algorithms in scala/python. Producing functional code that scales to big amounts of data.
Tech: scala (saddle, scalaz, spire, scala-notebook, algebird, opennlp, corenlp), python (numpy, pandas, scikit-learn, pylab, ipython notebook) Projects:

- Westeros – collection of algorithms that analyze text-based data for ad campaigns and make intelligent suggestions about adding keywords and negatives to campaigns/ad groups.
- Adalyzer, Anna recommendations, BidMan and others – collection of algorithms, working on numeric data to predict ad campaign success rates, analyze KPIs, predict structure, place bids for ad auctions, etc.

02.2011– 12.2012 **Scala developer**, *The New Motion*, Kyiv, Amsterdam.
I was the second person, joining the client's remote dev team (9 people now). Had a chance to work on/initiate/lead all the projects, company did.
Tech: scala, akka, scalaz, scalaxb, liftweb, dispatch, protobuf, mysql, cassandra, specs2, scalacheck, js, backbone.js, underscore.js, rabbitmq.
Projects:

- Car Sharing – Enabling companies share electric cars among their employees.
- Car Online – Putting the electric vehicle online. That is, get the information like accumulator charge state, GPS coordinates, etc. from the car to our servers, analyze, show that to the driver.
- Charge Network – Backend to operate charge points across Netherlands. This is a place, where charge points connect to, and get managing commands (like authorizing users to perform a charging session based on chargepass, rebooting the point, etc.) and software updates from.
- LoveToLoad – User portal for the chargenetwork, where users can get details and statistics data on their chargepoints and chargecards.
- Admin Portal – Place, where network administrators manage the network through interfaces, provided by the chargenetwork.
- Winterfell – A hub to exchange chargepoints status notifications across multiple networks. For example, we give our chargepoints statuses to oplaadpalen.nl.
- Bitlment – An internal project, that processes chargesessions to generate billings.
- MSP – Internal CRM project.

06.2010– 02.2011 **Android Java/Automation Test Engineer** → **Android Developer** → **Senior Software Engineer**, *Cogniance inc.*, Kyiv.

- INQ Mobile: Development of the internal testing framework, unit and smoke tests for the platform in terms of that framework. Development of the backend for syncing facebook events with android calendar. Final product is INQ Cloud Touch device.
- Laszlo Systems: Development of the mobile app for laszlo webtop server solution.
- Buildabrand: Designing and implementing new relevant search architecture and algorithms.

Tech: robotium solo, android platform frameworks, android apps; lucene, spring, hibernate, wordnet.

Opensource contributions (summary)

scala, *List of contributions*, Scala compiler and standard library.
Mostly minor fixes and improvements. Made a small contribution to the repl :kind feature of scala 2.11.

scalaz, *List of contributions*, An extension to the core Scala library for functional programming.
Contributed in various areas, including fixing FingerTree implementation, providing examples of using Isomorphisms, Writer monad, ST

scalaz-contrib, Interoperability libraries and additional data structures and instances for Scalaz.
Contriburing scalaz instances for 3rd-party projects

saddle, *List of contributions*, Scala data library in spirit of python's pandas and numpy.
Some contributions to enable the hdf5 support.

spark, Scala framework for iterative and interactive cluster computing.
Helped migrate the project to scala 2.10

poi.scala, Apache poi dsl for scala.
Creator and maintainer of the project

roy-mode, Roy mode for emacs.
Creator and maintainer of the project

typelevel-activator, A project to get started and get comfortable with typelevel.scala stack.
Creator and maintainer of the project

Others.
I regularly contribute to other opensource projects. The latest activity is on my github profile.

Tech skills

Scala

- *Web framewors: Lift, play2!, spray*
- *Akka (1.x, 2.x)*
- *scalaz (6.x, 7.x), shapeless*
- *numeric libs/frameworks: spark, saddle, scala notebook, algebird*
- *testing: specs2, scalacheck*
- *building: sbt, maven*

JS
- *jquery*
- *backbone.js*
- *roy, contributed to the project's ecosystem (maven plugin, emacs mode)*
- *have interest in ray, as well as idris and agda js backends*

Haskell

Python

Java

Tools

system: Arch linux + xmonad

coding: emacs

setup: mainly consists of: evil-mode, scala2-mode ensime (with scala-mode), haskell-mode, nXML-mode, js2-mode, python-mode (with pep8 and pylint), org-mode, LaTeX-mode, jabber.el and some self-made stuff for convenience

version controll: git, mercurial

Public speaking

There's a Prolog in your Scala! — **Scala eXchange conference**

Scala is known to be a nice blend of object-oriented and functional paradigms. A lesser known fact is that it's also a logic programming language...in type system! This talk aims to shed some light on how Scala's type-level programming is essentially logic programming, and give reasoning for code, comprising 8+ implicit parameters with funny names (FnHipsterAux). After all, it's not the syntax, but rather the semantics we're after right? Functional in the small, OO in the large, logic in the type system!

Scalaz: Learn You Yet Another Real World Gentle Haskell — **Scala User Group Berlin-Brandenburg**

An introductory talk about the high-level abstractions provided by scalaz. Demo: the IO monad.

funclub meetup solution in scala — **Funclub Berlin** — *A solution for the programming assignment, done in scala, with effect-controlling via scalaz*

Scalaz 6.0.4 talk (in Russian) — **Scala User Group Ukraine** — *An introductory talk about utilising abstractions from scalaz, version 6.0.4*

Interests

Math — I am fascinated by different branches, but recently extremely interested in the category theory.

Haskell — Initially started to ponder around it to become a better scala developer. As a result fell in love with its ideas and semantics.

Prolog — Started to ponder around to get a hold of typelevel programming in both scala and haskell. Still pondering around.

Drums, bass guitar — Just learning

Things I do every day

- state and prove theorems of formal constructivist logic (proof)
- learn cool new things
- do stuff for the Mathematics Inc.