

Ksenia Portu

Software engineer,
Mathematician, Haskell/Nix
admirer

Last update: December 13, 2022

Up-to-date version of CV is available at
<https://ksenia-portu.github.io/cv-dummy>

Linkedin

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Github

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Mathematics ●●●●	Haskell ●●●●	Functional programming ●●●●	Teaching ●●●●	NixOS ●●●●	Linux ●●●●
Blockchain ●●●●	Pi calculus ●●●●	Petri nets ●●●●	Linear Logic ●●●●	Session types ●●●●	Git ●●●●
Cryptography ●●●●	Devops ●●●●	Research and Software Development ●●●●	Category theory ●●●●	Dependent types ●●●●	Recursion-schemes ●●●●
Linear algebra ●●●●	Statistics ●●●●	Machine learning ●●●●	Comonads ●●●●	SQL ●●●●	Python ●●●●

Software engineer passionate about Mathematics

Professional Experience

Haskell Software Engineer
payment system

Haskell PostgreSQL docker docker-compose nix knative

Haskell Software Engineer
recruitment web platform

Haskell PostgreSQL docker docker-compose

Haskell Software Engineer
develop DSL

Haskell Nix package manager compiler lambda calculus Parsing Type inference Bidirectional typechecker Evaluation

Oct 2017 - Jan 2019 · 1 yr 4 mos

Blockchain Haskell developer
new generation blockchain

Haskell cryptography blockchain consensus algorithms p2p network routing smart-contracts RocksDB rancher docker

I have worked as Blockchain Haskell developer on new blockchain generation project.
The framework part of the project is open-sourced <https://github.com/Enecuum/Node>
and it has decent documentation and explanations about architecture and possibilities:
Building network actors with Enecuum Node Framework
Why Haskell?
Enecuum. Framework possibilities
Enecuum.Framework Possibilities, Part 2

Stack and knowledge

haskell:

Free monads (eDSLs)

STM (Software Transactional Memory)

Lenses

Key Value database – RocksDB

common:

– DevOps: rancher, docker

– Metrics: Grafana+Graphite+StatsD

– Project tracking: Redmine

– Knowledge database: Confluence

research and development in such fields as

– blockchain related:

– blockchain consensus algorithms (PoW,
PoS, PoA)

– p2p network, routing

– tests (integrational, functional)

– smart-contracts, petri-nets, pi-calculus

– common application dev related:

– config management

– cli

– loggingPackages, dependency management via stack.

– parallel computations and processes

Education

Ural Federal University / Applied Mathematics, 2007 - 2012, Master degree

Additional Experience

University Lecturer

Branch of Ural Federal University

Sem 2020 - Jun 2021 - full university year(two semesters)

teaching

I taught such disciplines as

– Information System's design

– High-level programming languages (Haskell)

– Databases

– Semantic networks

I curated numerous students' programming projects.