

Ksenia Portu

Software engineer,
Mathematician, Haskell/Nix
admirer

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

Linkedin

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Github

 [Ksenia Portu](#)

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

Software engineer passionate about Mathematics

Professional Experience

Haskell Software Engineer
payment system

Haskell PostgreSQL docker docker-compose nix knative

The project

Used stack

Tasks

Haskell Software Engineer
recruitment web platform

Haskell PostgreSQL docker docker-compose

The project

Used stack

Tasks

Haskell Software Engineer

develop DSL

Haskell

Nix package manager

compiler

lambda calculus

Parsing

Type inference

Bidirectional typechecker

Evaluation

The project

Used stack

Tasks

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

The project

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

Used stack

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

Tasks

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

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-- cli
-- loggingPackages, dependency management via stack.
-- parallel computations and processes
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Education

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

Additional Experience

University Lecturer

Branch of Ural Federal University

Sep 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.