Ksenia Portu

Software engineer, Mathematician, Haskell/Nix admirer

Last update: December 23, 2022

Up-to-date version of CV is available at

https://ksenia-portu.github.io/cv-haskell

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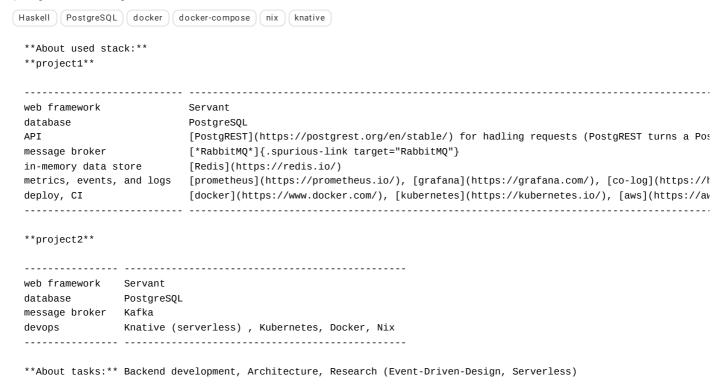
Mathematics ••••	Haskell	••••	Functional programmin	g	Teaching	••••	NixOS	••••	Linux	••••
Blockchain ••••	Pi calculus	••••	Petri nets	••••	Linear Logic	••••	Session types	••••	Git	••••
Cryptography	Devops	••••	Kubernetes	••••	Research and Software Developmen	••••	Category theory	••••	Dependent types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

Software engineer passionate about Mathematics

Professional Experience

Oct 2021 - Aug 2022 · 11 mos

Haskell Software Engineer payment system



Haskell Software Engineer recruitement web platform

```
Haskell PostgreSQL docker docker-compose

**About used stack:**

**haskell:** Yesod PostgreSQL

**About tasks:** Backend development
```

Apr 2019 - Feb 2020 ·10 mos

Haskell Software Engineer develop DSL

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

**About used stack:**

**haskell:**
megaparsec

**About tasks:**
Research and development
```

Oct 2017 - Jan 2019 · 1 yr 4 mos

Project tracking: Redmine Knowledge database: Confluence

Blockchain Haskell developer new generation blockchain

```
(Haskell ) (cryptography ) (blockchain consensus algorithms ) (p2p network ) (routing ) (smart-contracts ) (RocksDB ) (rancher ) (docker
 # Description
 **About 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](https://gist.github.com/graninas/9beb8df5d88dda5fa21c47ce9bcb0@
 [Why Haskell?](https://enqblockchain.medium.com/why-haskell-eacb087f3adb)
 [Enecuum. Framework possibilities](https://enqblockchain.medium.com/enecuum-framework-possibilities-d4fa49c3ea40)
 [Enecuum.Framework Possibilities, Part 2](https://enqblockchain.medium.com/enecuum-framework-possibilities-part-2-7c8
 **About used stack:**
 **haskell:*'
 Free monads (eDSLs)
 STM (Software Transactional Memory)
 Key Value database - RocksDB
 **common:**
     DevOps: rancher, docker
     Metrics: Grafana+Graphite+StatsD
```

About 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
- -- cli
- -- logging
- -- Packages, dependency management via stack.
- -- parallel computations and processes

Education

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

Languages

English, Russian

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.