Ksenia Portu

Software engineer, Mathematician, Haskell/Nix admirer

Last update: December 14, 2022

Up-to-date version of CV is available at

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

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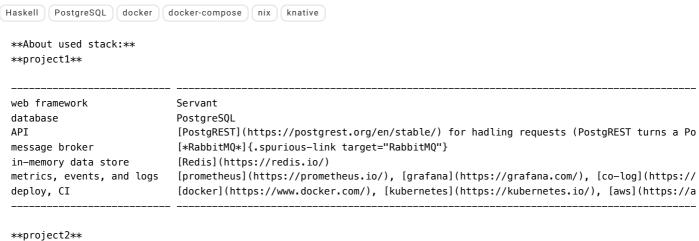
Mathematics ••••	Haskell	••••	Functional programming	g	Teaching	••••	NixOS	••••	Linux	••••
Blockchain Pi calculus	••••	Petri	••••	Linear	••••	Session	••••	Git	••••	
	Calculus		nets		Logic Research		types			
Cryptography ••••	Devops	••••	• Kubernetes	••••	and Software	•••	Category theory	••••	Dependent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

Software engineer passionate about Mathematics

Professional Experience

Oct 2021 - Aug 2022 · 11 mos

Haskell Software Engineer payment system



web framework Servant database PostgreSQL message broker Kafka

Knative (serverless) , Kubernetes, Docker, Nix devops

About tasks: Backend development, Architecture, Research (Event-Driven-Design, Serverless)

Haskell Software Engineer recruitement web platform

```
Haskell PostgreSQL docker docker-compose

**About used stack:**
 **haskell:** Yesod PostgreSQL

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

**About tasks:**

Research and development
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Oct 2017 - Jan 2019 · 1 yr 4 mos

Blockchain Haskell developer new generation blockchain

Metrics: Grafana+Graphite+StatsD Project tracking: Redmine Knowledge database: Confluence

```
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-2-7c
 **About used stack:**
 **haskell:**
 Free monads (eDSLs)
 STM (Software Transactional Memory)
 Key Value database - RocksDB
 **common:**
     DevOps: rancher, docker
```

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.