

# Alexander V. Nikolaev

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## Objective

Experienced software engineer, with 17-years experience in software development, 12-years experience in system administration and have strong problem solving skills, initiative, willing to accept responsibility, strong team player, and strong communication skills. Looking for permanent or contract position (remote, C2C, basic rate \$45-\$60/hour).

## Relevant experience and skills

- Hardware/software system integration.
- Linux – deep knowledge of system management in unix systems.
  - Proficient knowledge of Nix package manager and NixOS Linux distribution, contributing to nixpkgs, develop custom solution based on NixOS.
  - Familiar with other major Linux distributions
  - Knowledge of DevOps (familiar with Salt and Ansible, Terraform, basic knowlege of others systems).
  - Embedded linux (Yocto/OE, build automation for xilinx based project).
- Haskell (3 year of experience)
  - Development of command-line tools, parsers, serializers.
  - Modern Haskell-based web stacks (Servant, Yesod, WAI).
  - Interaction with RDBMS (beam, opaleye).
  - Knowledge of Stack, Cabal, haskell.nix, and all other related tooling.
- Nix/NixOS (6 years of experience)
  - Proficient packaging various open-source software, knowledge how to deal with proprietary stuff.
  - Maintaining of private tree of packaged custom software.
  - CI and CD toolchains based on Nix
  - Familiar with various language-specific packages (i.e. Go, Python, Ruby, Rust, Haskell)
- Python (15 years of experience):
  - WSGI stack.
  - Web frameworks (Pyramid, Flask, Tornado)
  - Twisted, asyncio, gevent (asynchronous servers, clients and process dispatchers)
  - SQLAlchemy (custom types, extensions)

- Other programming languages and technologies
  - Basic knowledge of Ocaml, Rust, PureScript, Go.
  - Various MQ brokers (RabbitMQ, Kafka, Amazon SQS)
  - Lua (bindings for C/C++ libraries, and contribution to several open source projects).
  - C++ (4 year of experience, using of STL and Boost libraries)
  - shell scripting, development related to system management.

Can read/understand code in most of modern imperative and functional languages.

- Knowledge of AWS cloud services, experience with Dynamo DB and SQS.
- Proficiency with docker, and related tools.
- Databases (basic knowledge of both SQL and NoSQL including Redis and Riak)
- Network protocols: HTTP (including websockets), SMTP, HTTP, developing custom protocols based on HTTP (REST/XML-RPC/JSON-RPC). Knowledge of peer-2-peer technologies.

## Employment history

### Sep 2020- now MonadFix (Software Engineer, C2C Contract)

- Various Haskell development (develop components of Nau – purescript-to-haskell transpiler)
- Developed custom GHC plugins
- Contribute fixes and improvements into large-records and record-dot-preprocessor plugins
- Supported Nix-based development environment

### 2019-2022 Macnica Americas/LogicEditor (Software Engineer, C2C Contract)

- Developed Yocto Linux packages for custom software
- Developed service for embedded linux, to arbitring access to hardware from CLI tools and REST API components. (c++)
- Various other release engineering related automation (dockerization of build process, QA tools)
- Maintaining Nix-based development environments

### 2019 (Feb-June) CentralApp S.E. (Software Engineer, C2C Contract)

- Developed parts of core REST services (haskell, servant, opaleye)
- Optimized build of containers, integrate caching intermediate build products.
- Formalized and documented database migrations procedures.

### **2017-2019 LogicEditor (Software Engineer, C2C Contract)**

- Developed terminal server, leveraging legacy applications as web based SaaS (including python software to control servers via REST and/or websockets)

### **2017-2018 Serokell (internship)**

- Worked on both customer-side code, and code for inner infrastructure. (Junior/mid-level haskell, servant).

### **2015-2016 Asteris, LLC (Software Engineer, C2C contract)**

- Developed various components of Cisco's Mantl (<https://github.com/mantl/mantl>)
- Developed storage related (LVM/FS) components of <http://converge.asteris.com>
- Performed pre-release testing of Mantl for AWS and OpenStack platforms.

### **2013-2015 SendGrid, Inc: (Software Engineer, C2C contract)**

- Developed agent software for CleverDB project (python). Also supported packages of `cleverdb-agent` for major linux distributions.
- Various other in-house tools and libraries (golang, python, erlang)

### **2011-2012 LogicEditor (Software Engineer, C2C contract)**

- Developed various enhancement for Lua infrastructure, and binding for Lua to third party libraries (most of this activity open sourced, and visible via my github profile)

### **2010-2011 IT Infrastructure (Embedded Software Engineer, C2C contract)**

- Was hired to work fulltime on OpenInkpot project (worked on system components and applications)
- developed various plugins for CoolReader application on LBook e-ink readers

### **2008-2018 Victoria Nova, UAB (Software Engineer, CTO, owner)**

- Various web development (python, django, pyramid, tornado) for customers, including realtime web applications.

### **2007-2008 DIP Studija (Software Engineer, C2C contract)**

- Developed prototype of custom video hosting for in-house usage (storage and server parts) (python, twisted)
- Developed various custom web crawlers.

## **2007 ArcusNovus (Software Engineer, C2C contract)**

- Development of driver for USB adapter of satellite receiver (both userspace and linux kernel)

## **2004-2007 Jet Infosystems (QA Software Engineer)**

- Developed system for automatically regression testing of complex software system.
- Administrated farm of servers for QA (Solaris and Linux)

## **2002-2004 AltLinux (Software Developer)**

- Prototyping automated build and test environment which led to 3 times shortening build/test/improve cycle.
- Developed several components for configuration management system for firewall appliance (C++)

## **2000-2002 TransSoftMedia (Software Developer)**

- System integration for videoconferences and IP-phone appliances pre-production prototypes (C++,perl).

## **Spoken languages**

- English (fluent)
- Russian (native)
- Lithuanian (basic proficiency)

## **Professional interests**

- NixOS linux distribution
- Functional programming languages
- Compilers and code generations

## **Links**

- LinkedIn: <https://linkedin.com/in/avnik>
- GitHub: <https://github.com/avnik>

## **Notes**

- Have EU residence status/work permit, can work as staff member (remote) or as independent contractor (C2C contract).
- As a C2C contractor I need no visa and no explicit work permit to work remotely in US/UK/other EU countries