Curriculum vitae

Name: Korepanov Vyacheslav Aleksandrovich
E-mail: real93@live.ru
Telegram: vkorepanov
Birth date: 16.03.1993
Location: Russian Federation, Samara
Roles: Technical lead, software engeneer, devops

Education

2010 - 2015: Povolzhskiy State University of Telecommunications and Informatics Specialization: software engineer.

Skills

Architecture, project management

Design and work on architecture of microservice software products. Refactor monolitic applications to indepentent parts and containers.

API development for web based apps (json/bson/binary), websocket protocols designing. HTTP routes designing.

Decomposition and assigning tasks in redmine, youtrack, github, gitlab, vikunja.

Finding the best opensource solutions to solve business problems. Language, framework, neural model, library selection by task, taking into account human and technical resources.

Experience in mentoring and training in modern technologies (python, docker, linux, git, etc).

Basic experience in database design (postgresql, mongodb).

Web development

Backend: python (fastapi, flask), rust (actix, tokio, tungstenite, rocket), nodejs (express, ws, typescript only), C++ (drogon, oatpp, pistache).

Frontend: react/preact, vue, typescript, tailwind. Basic experience.

System software development

- **C/C++**: usage from 2011 (Commertial usage from 2014, C++98 - C++23). Active STL usage. Cross-platform development (Linux, OS X, Windows). Libraries: Qt (UI, multithreading, IO with COM port, Web, etc), Qwt, boost-asio, gmock, gtest, KDChart, qscintilla, OpenCV (basic algorithms and image recognition), DCMTK, VTK, pistache, tesseract, drogon, oatpp, poppler and many others. OS X libraries: Cocoa, Foundation, PromiseKit, Sparkle.
- **Rust**: web servers, usage with postgresql, mongodb, redis.
- **Python**: web servers, work with AI - whisper, fbprophet, tensorflow, huggingface, tesseract. Automation scripts.

Software usage: cargo, cmake, cppcheck, docker, doxygen, git, make, mariadb, meson, mongosh, pandoc, psql, qmake, redis, valgrind, valkey, vim and others. Work with operation systems: OS X, CachyOS, ArchLinux, Gentoo, Exherbo, Fedora, OpenSUSE, Ubuntu, Debian, Rocky Linux, CentOS.

Devops

Active docker and docker compose usage in production. Experience with lxc, kvm (virt-manager and bash scripts). Basic kubernetes knowledge.

Network setup (tun, bridge, wireguard, openvpn) with network manager, systemd-networkd, openwrt. Firewalld configuration. Basic knowledge of iptables and ufw.

CI/CD configuration on gitlab, github. Deploy on production using SSH without agents.

Deployment of many self-hosted solutions like Prometheus, Graphana, Gitlab, Gitlab Runner, Revolt, Vikunja, etc. Configure Linux applications.

Work experience

2013 - 2014: **IPUSS RAN** - Laboratory technician
Work: software development for STM32F4 microcontroller. Data transfer from eddy current sensort to PC using UART. Data visualization on the plot.

2014 - 2017: **Networkcentric platforms** - Software engineer / Senior engineer
Work: development of crossplatform software (Windows and GNU/Linux). Software design and implementation of user interface, work with postgresql, programming of multi agent system and business logic.

2017 - 2019: **Formal Technology** - Software engineer
Work: development of color correction plugins for OS X. Design and implementation of a code used for unite different APIs towards a single one (FxPlug, Adobe Premiere API, OFX). Design and implementation of user interface using Swift (Cocoa framework). Work with package installer, plist files, xcode build system.

2019 - present: **Sirius Samara** - Software engineer
Work: software design and development, technology management, server management and deployment, devops.

Projects and technologies

- Cinema Grade - Color correction plugin. C++, Objective C, Swift, GLSL.
- Dicom viewer - view DICOM files from medical devices (CT, MRT, rentgen, etc). C++, 3D rendering (vtk), web server, libpng.
- PACS storage - DICOM storage. C++, Haskell, Bash.
- Document recognition - image/pdf to text. Python, flask web server, C++, tesseract, opencv.
- Video conference app (SFU). About 20 microservices in C++, Nodejs, Rust, Python. Thirdparty product integrations. Mediasoup, websockets, webrtc.
- Revolt - discord alternative. Work with backend in Rust and frontend in preact.
- RTSP recorder - IP camera recorder. My project based on ffmpeg, Rust, Bash.
- Other projects. C++, Python, postgresql, Qt and many others.