Sergey Vilgelm
Principal Software Engineer

Over 20 years of software development experience with expertise in Rust, Golang, Python, Kubernetes, Docker, Rest API, AWS, Azure.
Ability to learn new technologies, out of box thinking, ability to manage projects, ability to work within tight deadlines, self-motivated, good team player.

Location: Seattle, WA
Looking for: remote in US || hybrid in Seattle/Bellevue, WA || relocation to EU

Email: sergey@vilgelm.com
Phone: +1 (669) 292-7940
Website: https://vilgelm.com
GitHub: https://github.com/SVilgelm
Open Source Projects: https://github.com/sv-tools
LinkedIn: https://www.linkedin.com/in/svilgelm/

Professional Experience

Microsoft
Nov 2023 - …
Redmond, WA, USA
Principal Software Engineer

- **Leading the Rust experiment**
  Re-implementing an existent service in Rust. The goal of experiment is to figure out the readiness of the internal tools and CI/CD pipelines to support the applications written in Rust lang. The application must be integrated with all internal tools, like logging and metric systems; be able to use token issuer and validation services; support GRPC and Rest communication protocols and etc…
- **Driving the revers proxy PoC**
  Designing, driving to clarity and finding appropriate solution to shield the API layer of any internal services without direct integration with concurrency management system.
  The project should provide dynamic and distributed rate limiting and scheduling functionality by intercepting all requests and responses to a protected service; analyze the requests and check if the backend system has enough resources to fulfill the requests or postpone the execute by scheduling and reserving necessary resources; process back-pressure signals to make the informed decision on earlier stages.

Technologies: Rust, GRPC, Rest API, Windows HTTP Sys, Azure.

Styra
May 2021 - May 2023
Remote, USA
Senior Software Engineer

- **Lead of the Data Sources project.**
  Adding new data sources, supporting the existing data sources and optimizing the memory consumption and performance. Adopting the datasources code to Load project (Enterprise OPA).
  Processing the data in different formats, like json, xml, yaml, LDAP/AD on the server side using different

approaches to transform or modify the data in place, avoiding unneeded unmarshaling/decoding, to save the memory and CPU resources. Optimizing the service for high performance and faster processing of incoming data flow.

- **Lead of the e2e test framework.**
  Testing the different systems via http requests and running different versions of the micro-services in the Docker containers. Collecting the stats from the docker containers and the http requests. Preparing the tests reports, including the API coverage and Docker stats.

Implementing new features, reviewing the pull requests, supporting the existing code. Implementing Kubernetes charts to deploy the micro services in the AWS or Minikube for local development/testing.

Technologies: Golang, Kubernetes, Docker, Rest API (swagger), AWS, GCP, Azure, Git, OPA

IBM
Oct 2019 - May 2021
Austin, TX, USA
Software Developer

- **GraphQL Gateway**
  Leading the implementation of a common interface to request a data from different micro-services and databases (MongoDB, MySQL) using Nautilus Gateway. Leading the process of adding the graphql endpoints in other services.
- **Reporting Framework**
  Leading the implementation of the service to generate reports in different formats using GraphQL gateway for fetching and processing a data. Transforming the data using the Json Query syntax in the report templates. Optimizing the data processing for the large data flow and for high performance.
- **Pricing Rules Engine**
  Leading the implementation of the a rules engine service to adjust the order prices based on the predefined rules or rate cards using Json Logic. Optimizing the rules engine to process the high number of small request by implementing the rules execution login in Go. Using Redis to cache the results for the most frequent requests

Writing base code, reviewing pull requests, creating and tracking the tasks. Implementing Kubernetes charts to deploy the micro services in the IBM Hybrid Cloud or Minikube for local development/testing.

Technologies: Python, Golang, Kubernetes, Docker, Rest API (swagger), GraphQL, gRPC, JsonLogic, Redis

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Mirantis
May 2013 - Aug 2019
Austin, TX
Senior Software Engineer

- **IAM**
  Implementing a system to provide a central point of users and permissions management for Kubernetes and OpenStack. Written in Go lang, It uses Keycloak as an OpenID provider and makes it possible to integrate OpenStack and Kubernetes with Keycloak.
  Using Docker to deploy the IAM API server in a Kubernetes cluster.
- **Core developer at Patrole**
  Patrole is a set of integration tests to be run against a live OpenStack cluster. It has a battery of tests dedicated to validating the correctness and integrity of the cloud's RBAC implementation.
  https://github.com/openstack/patrole
- **OpenStack monitoring tool using RabbitMQ**
  A monitoring tool for OpenStack uses notification channels to analyze the messages and keep a history of object changes.

- **Keystone-migration**
  A migration tool for keystone objects from one cloud to another using api v3.
  https://github.com/SVilgelm/keystone-migration
- **Glance-replicator**
  Glance-replicator for independent Keystone with api v3
- **Cloudferry**
  OpenStack cloud workload migration tool.
  https://github.com/Mirantis/CloudFerry
- **Neutron expert**
  OpenStack consultant for Ericsson Neutron's team. Mentoring the team members, making presentations, fixing the bugs in a code of the custom neutron plugin. Preparing the code base for upstreaming.
- **Contractor at Symantec**
  Fixing the bugs, improving a performance of the pl/pgsql scripts.
- **Vyatta Niblick**
  Developing a Quantum plugin together with a mechanism for deploying and configuring Vyatta VMs on demand.
- **Migration Volume in Cinder**
  Implementing capabilities to migrate volumes between nodes.

Technologies: Python, OpenStack components, Postgresql, Kubernetes, Docker

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Reggi Business
Feb 2012 - Mar 2013
Moscow, Russia
Software Developer

Enhancement of the system for domains registrar. Rewriting many modules from PHP to Python.

- **PowerDNS**
  Deploying the PowerDNS. Developing the manage system for a domain records using the Django and JsonRPC. Configuring database replicas to create child dns services.
- **Zabbix**
  Deploying and configuring Zabbix to monitor all Servers. Developing UserParameter scripts.

Technologies: Python, Django, PHP, PostgreSQL, JSON

Aspan Telecom
Sep 2010 - Feb 2012
Almaty, Kazakhstan
Software Developer

Development and maintenance the billing system.

- **Accounting equipment**
  Developing a module of accounting equipment for a billing system.

Technologies: FreeBSD, PostgreSQL, Python, Turbogears, CherryPy

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Arna (BeTop, Ducat)
Dec 2008 - Sep 2010
Almaty, Kazakhstan
Software Developer

- **Billing system**
  Developing custom billing system, netflow collector.
- **NetUP UTM 5 Billing System**
  Deploying and customizing UTM5 web cabinet.

Technologies: Delphi, DevExpress, UniDAC, PostgreSQL, Oracle, NetFlow5, PHP

Electronic Archive Corp
Sep 2007 - Oct 2008
Almaty, Kazakhstan
Software Developer

- **Saperion**
  Deploying and configuring the Saperion to customers.
- **Knowledge base**
  Developing a knowledge base system management using Drupal.

Technologies: VisualBasic, Delphi, PHP, Drupal

Skif Trade
Jan 2005 - Aug 2007
Almaty, Kazakhstan
IT-technician, Software Developer

- **Application for the cash registers**
  Developing software components for the cash registers.
- **IT-infrastructure**
  Deploying IT-infrastructure within 3 supermarkets.

Technologies: Delphi, MSSQL

Academic Records

Almaty University of Power Engineering and Telecommunications, Kazakhstan.
Sep'1999 – Jun'2011
Electronic systems and technologies, Degree in Engineering.

Certificates

Udemy
- [Ultimate Rust Crash Course](#)
- [Ultimate Rust 2: Intermediate Concepts](#)
- [Clean Code](#)
- [gRPC[golang]](#)
- [Protocol Buffers](#)
- [Go Concurrency](#)
- [Go Testing](#)
- [Swagger](#)

MongoDB
- [M001: MongoDB Basics](#)
- [M201: MongoDB Performance](#)
- [M103: Basic Cluster Administration](#)

Coursera

- [A comprehensive approach to C# Fundamentals](#)
- **Google Project Management**
    - [Foundations of Project Management](#)
- **Executive Data Science**
    - [Data Science in Real Life](#)
    - [Managing Data Analysis](#)
    - [Building a Data Science Team](#)
    - [A Crash Course in Data Science](#)
- [Getting Started with Google Kubernetes Engine](#)
- [Algorithmic Toolbox](#)

Stanford Online

- [Computer Science 101](#)

Austin Community College

- [Cloud Native Application](#)