Makhonin Alex

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Skills

- Golang | Python | Kubernetes | Docker | containerd | Werf | Helm | Buildah | Arduino | Perl | Linux | Bash | Redis | RabbitMQ | Git
- AWS | GCP | Selectel | Yandex Cloud | CI/CD | Gitlab CI | GitHub Actions | Grafana | Prometheus | Zabbix | Nginx | HAProxy | Gunicorn
- MySQL | PostgreSQL | MongoDB | CockroachDB | Terraform | Puppet | Microservices | Distributed Systems | Backend | DevOps
- English - *B2* | French - *A1* | Russian – *Native*

Experience

Software Engineer — **Flant** — *Remote, Russia* — **02/2023 - Current**

- Developed and increased stability of the Deckhouse Kubernetes platform and the open source projects it uses

DevOps Engineer — **Flant** — *Remote, Russia* — **12/2021 - 02/2023**

- Supported high availability containerized systems.
- Setted up and deployed applications using **Werf**, **Helm**, **Buildah**, **Docker** in **Gitlab CI** or **Github Actions**.
- Implemented CI/CD patterns to simplify product development (**r**eview environments, canary deployment, blue-green deployment, multi data center deployment).
- Maintained and developed **Linux** server infrastructure.
- Extended and used the **Kubernetes** API to simplify the routine operations (annotations-exporter and database-users-operator).
- Contributed to open-source repositories (deckhouse, redis-sentinel-proxy, ingress-nginx)

Junior Bioinformatic Scientist — **BostonGene** — *Moscow, Russia* — **09/2021 - 11/2021**

- Improved NGS Data Quality Control processes with **Python**, **FastQC**, **MultiQC**.
- Created a service for identifying patients by SNPs whose sequencing has already been studied (**PostgreSQL** + **SQLAlchemy** + **NumPy**).

Research Laboratory Technician — **Shemyakin and Ovchinnikov Institute of Bioorganic Chemistry** — *Moscow, Russia* — **01/2020 - 09/2021**

- Created and maintained web services for internal purposes using a **Linux** server, **Nginx**, **Gunicorn**, **Python** + **Django** (project link).
- Designed and developed automatic microscope lens rotation using **Arduino** and stepper motor (project link).
- Constructed fast-drug application system with Openspritzer for patch-clamp research.
- Attempts have been made to construct a model for predicting whether a protein belongs to the Ly6/uPAR group and test it on the sequencing of two starfish (**Pandas**, **scikit-learn**, **NumPy, blast**) (project link) (article).
- Wrote Python functions to visualize the alignment of Ly6/uPAR proteins with cysteine-cysteine bonds.(**Matplotlib**, **biotite**, **NumPy**, **Biopython**, **seaborn**) (project link) (article).

Education

Bachelor's Degree — **National Research University Higher School of Economics** — *Moscow, Russia* — **09/2019 - Current**

- Cell and Molecular Biotechnology, Department of Biology and Biotechnology

Projects

- regex-dictionary: Python type to use regex as keys in dict. **(01/2023)**
- cube-rotate**:** golang implementation of cube.c and donut-math with user-friendly cli. **(11/2022)**
- go-grep**:** A simple library to replace grep functionality in go. **(08/2022)**
- Third year coursework: "Sequence-Based IsomiR Target Prediction" (repositories that were also used: mirdbts and TargetScan) **(2022)**
- Second year coursework: "Expression of Ly6/uPAR Proteins in Alzheimer Disease". **(2021)**

Others

- **Machine learning Summer school "MTS.Theta"**: Result project: human text recognition model with telegram bot and simple frontend for browser **(08/2021)**
- **Article "Just-for-fun experiment: Deploying Kubernetes on two old laptops with Gentoo Linux" (11/2022)**
- **Scopus Author profile**