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# Artem Zhukov CV

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Python Software engineer with more than 4 years of experience.

Interested in web applications, everything which uses asyncio, DevOps, infrastructure automation, bots etc.

Compliment projects with machine learning, growing as a professional, learning new technologies, experimenting and building interesting products.

I am pedantic in terms of writing clean and simple code, testing and documenting my work. And I have a big passion to the python asyncio stack.

# Tech stack

- Linux operating systems
- Containerization, distributed systems, cloud computing (Docker, AWS, Kubernetes)
- Software development (
  - `web`, `web applications`, `microservices`, `apis`, `bots`,
  - `testing`, `code linting`,)
- Backend developer (
  - `python`, `asyncio`, `aiohttp`, `numpy`, `pandas`, `scipy`, `pytorch`,
  - `keras`, `scikit-learn`, `xgboost`, `opencv`, `freecad`, `aiogram`)
- Automation (
  - `CI/CD`, `Gitlab CI`, `Circle CI`, `Ansible`, `Python`, `docker-compose`,
  - `Kubernetes`, `Vagrant`,)
- Other tools (
  - `shell scripting`, `git`, `docker`, `gitlab`, `postgresql`, `redis`,
  - `celery`, `openapi`, `swagger`, `pre-commit`)
- `vim`

# Free time

I contribute to open-source projects (i.e.

<<https://github.com/cr0hn/aiohttp-cache>>,  
<<https://github.com/webknjaz/docker-freecad-cli>>,

), writing telegram bots (i.e.

<[https://github.com/ZhukovGreen/gcal\\_time\\_track\\_tg\\_bot](https://github.com/ZhukovGreen/gcal_time_track_tg_bot)>,

), testing different neural nets architectures and learning new things.

# Experience

## Python Software Engineer at Redhat

Dates Employed Apr 2020 - Now

I am working in OS, Application and Modernization Group (OAMG).

Primary responsibilities are:

- Maintaining contributing to OAMG repositories <<https://github.com/oamg>>

## System Architect | Machine learning engineer | Software team leader at Remak

Dates Employed Jan 2016 – Jan 2020

Employment Duration 4 yrs 1 mos

Building a software platform to support new products and company processes.

**\*\*Team leadership:\*\***

- leading the team of 4 developers, learning from them
- specified sprint epics, controlling team progress, reporting to the client
- determining backend architecture and technological stack

**\*\*Software developer:\*\***

- building async microservices (Python, aiohttp, Docker, openAPI ...)
  - with the normal pythonic worker
  - where the worker was a CDLL of .NET assembly and applied different approaches in parallelization
  - numeric microservices where the main worker was a numpy or pytorch model
- Automate the openAPI spec definition with the help of swagger, attrs, marshmallow etc.
- unit, integration and load testing
  - primary with the pytest
  - API mocking
  - integration testing for microservices based application
- documentation and code review
- setting up CI pipelines for linting, testing, and building images

**\*\*DevOps:\*\***

- Setting up automatic deployment system with the help of Gitlab runners, docker-compose, shell scripting, and Gitlab CI.
- Writing Ansible and Vagrant scripts to deploy the app on Kubernetes
- Containerization of different applications for the needs of the team (
  - i.e. special cli version of FreeCAD, the image with pythonnet support on Linux and Mono, linux with wine integration to run windows assemblies on linux)
- Building infrastructure automation for development and staging environments
- Setting up app monitoring with the help of Gitlab CI, Sentry and some scripting
- Setting up app templating, pre-commit hooks for a team

**\*\*Machine learning engineer:\*\***

- applying machine learning to improve user experience.
  - Particularly speeding up the calculation processes
  - Supervise learning, mostly with gradient boosting and partly with the combination of neural nets in PyTorch
  - applying optimization with evolutionary algorithms (SciPy + PyTorch)

## HVAC (heating, ventilation and air conditioning) professional

Dates Employed May 2006 – Aug 2016

Employment Duration 10 yrs 3 mos

I was working in a variety of positions within the HVAC industry

- Compact Air Handling Units (AHU) project manager (~ 1 year)
- AHU technical support (~1 year)
- HVAC designer (~5 years)
- Energy modeler for LEED certification (~ 1 year)
- Technical supervisor on site (~1 years)
- Ventilation systems installer (~1 year)

## # Projects

- Air handling units selection engine powered by machine learning (unable to share because of NDA)
- Cli utility mimicking docker cp  
<<https://github.com/ZhukovGreen/docker-cp>>
- Cli version of FreeCAD  
<<https://gitlab.com/remak-dva/docker-freecad-cli>>
- This is how I bought my home  
<<https://gitlab.com/zhukovgreen/pozemky>>
- This is how I used to track my time  
<[https://github.com/ZhukovGreen/gcal\\_time\\_track\\_tg\\_bot](https://github.com/ZhukovGreen/gcal_time_track_tg_bot)>
- Dog breed identification  
<[https://github.com/ZhukovGreen/dog-project/blob/master/dog\\_app.ipynb](https://github.com/ZhukovGreen/dog-project/blob/master/dog_app.ipynb)>
- Reinforcement learning  
<<https://github.com/ZhukovGreen/machine-learning/blob/submission/smartcab/projects/smartcab/smartcab/agent.py>>
- Supervise learning problem  
<[https://github.com/ZhukovGreen/UMLND/blob/d7a1326247705cac90120c266ca6296e7b19e257/finding\\_donors/finding\\_donors.ipynb](https://github.com/ZhukovGreen/UMLND/blob/d7a1326247705cac90120c266ca6296e7b19e257/finding_donors/finding_donors.ipynb)>
- PyTorch, transfer learning  
<<https://github.com/ZhukovGreen/pytorch-scholarship-challenge>>
- Unsupervised learning problem  
<[https://github.com/ZhukovGreen/machine-learning/blob/submission/customer-segments/projects/customer\\_segments/customer\\_segments.ipynb](https://github.com/ZhukovGreen/machine-learning/blob/submission/customer-segments/projects/customer_segments/customer_segments.ipynb)>

## # Education

### ## Stanford University Online

Degree Name Online Education

Field Of Study CS229: Machine Learning

Grade NA

Dates attended or expected graduation 2016 – 2017

I passed through all lectures videos and keynotes, resolved all assignments.

Course syllabus: <<http://cs229.stanford.edu/syllabus.html>>

### ## Udacity

Degree Name Nano-degree

Field Of Study Machine Learning

Grade Nano-degree

Dates attended or expected graduation 2016 – 2018

<<https://www.udacity.com/course/machine-learning-engineer-nanodegree--nd009>>

## ## Donbass State Academy of Civil Engineering and Architecture

Degree Name Master's Degree

Field Of Study Mechanical Engineering (HVAC)

Grade M.Sc. in heating, ventilation, air conditioning systems

Dates attended or expected graduation 2002 – 2008

This is my primary base education. A lot of mathematics, physics, and drawings.

### # Courses

- Udacity: PyTorch Scholarship Challenge from Facebook
- A vast amount of different courses at Udemy, such as data structures and algorithms, PyTorch Reinforcement learning etc.

### # Languages

- Russian - native
- English - good professional level
- Czech - good professional level

### # Social profiles

- GitHub <<https://github.com/zhukovgreen>>
- GitLab <<https://gitlab.com/zhukovgreen>>
- StackOverflow <<https://stackoverflow.com/users/4351027/artem-zhukov>>
- Twitter <<https://twitter.com/zhukovgreen>>
- LinkedIn <<https://www.linkedin.com/in/artem-zhukov-0556b422/>>