

# Taras Shevchenko

## Executive summary

1. Strong in-depth skills in STL, C++, Python, general-purpose algorithms and generic programming.
2. Machine Learning Engineering.
3. Data Engineering.
4. Bottom-up software design.
5. Deep understanding of compilers and column-store databases.
6. Strong understanding of algorithms, networking, systems architecture and end-user experience.
7. Systems programming.
8. In-breadth and in-depth understanding of Open Source software facilities.

## The last industrial experience

### Proxet (2016 - present)

Key results:

- Designed and developed a whole Learning to Rank pipeline for GIF search on Slack (the /giphy command on Slack).
- Designed and implemented a Learning to Rank pipeline for GIF recommendations.
- Designed and implemented Trending Search CMS for Giphy (conceptually similar to Google Trends).
- [Improved the FastText performance for some tasks more than by a factor of 2.](#)
- Adopted Bayesian approach for evaluation of A/B tests at Giphy.
- Designed and implemented a language detection service for Giphy Search team.
- Designed and implemented a flight planning system using the OR tools and a hand-crafted algorithm.
- Designed and implemented an extremely fast Clickhouse batcher.
- Created a Machine Learning model for Ideal Customer Profile evaluation.

Daily activities:

1. Design and implementation of Machine Learning pipelines.
2. Systems design.
3. Programming.
4. Performance measurements.

5. Writing Test Cases.
6. AB testing.
7. Code reviews.
8. Product design.

## Open Source contribution

Product	Purpose	Contribution
facebook/FastText	Word embeddings and supervised models	2x performance improvement for training and inference

## Talks

Title	Place	Summary
<a href="#">6 Algorithmic Journeys with Concepts</a>	CppCon 2019	How to use concepts for the design of generic algorithms
Writing native extensions with pybind11	Proxet	How write something, which is faster than numpy
Algorithms Lectures	Proxet	Internal lectures about general-purpose algrihtms

## Education

Institution	Degree	Specialization	Thesis
Institute for Applied System Analysis at NTUU Kyiv Polytechnic Institute	Master's	System Analysis and Control Theory	Multimodal Text Search System
	Bachelor's	Artificial Intelligence	Distributed Search System with Relevance Evaluation

## Other information

- Solid mathematical culture.
- ACM ICPC semifinalist.

## Skills

Programming languages	C++(98,11,14,17,20), Python, C, Java, Scala, Ruby, JS
C++ stack	Boost libraries (mostly Align, Asio, Beast, Interprocess, Geometry, and Graph), Adobe Source Libraries, Perf, Seastar, Ninja-build, CMake, Clang, GCC, Protobuf, FlatBuffers, AddressSanitizer, MemorySanitizer, ThreadSanitizer, LeakSanitizer, NginX modules development
Python stack	CPython, Cython, Pybind11, SQLAlchemy, Starlette, FastAPI, Google OR-Tools, Celery, Redis-Py, PySpark
Operating systems	GNU Linux and FreeBSD
Technologies	Bash, Docker, Kubernetes, Vagrant, Nginx, Haproxy, Vault
Databases, etc	Postgres, ClickHouse, MySQL, ScyllaDB, SQLite, Memcached, Redis, LevelDB, WiredTiger
Machine Learning	Deep understanding of fundamental methods, numpy, scipy, PyMC3, pytorch, tensorflow, catboost, sklearn, xgboost, shap, fastText, StarSpace
Other	Payment Systems, CI/CD process, AB-testing

## Contacts

**Github:** [tshev](#) **Skype:** tshev.com **LinkedIn:** [Taras Shevchenko](#) **Location:** Kyiv, Ukraine