# ILIA ZAITSEV

## Software and Machine Learning Engineer

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#### PROFESSIONAL PROFILE

Software and Machine Learning Engineer with strong academic background and 4+ years' of applied machine learning, data science and programming experience. Advanced knowledge of SW design patterns, fluent in Python and Swift, strong in object-oriented and functional programming paradigms and in technical writing. Currently working as Contractor/Freelancer on long term projects as a "meta-programmer" writing programmes for other programmers, data scientists and technical specialists in AI/ML field.

Excels at applying AI/ML theory to commercial development in high volume data processing, visualisation and classification.

#### KEY SKILLS

Al/Machine Learning: Scikit-Learn, PyTorch, Data Science, Deep Learning, Collaborative Filtering, Neural Networks, Decision Trees, Statistical Analysis, Model Complexity & Tuning, Model Fitting & Prediction, Regression vs Classification Problems, Computer Vision, Reinforcement Learning, Algorithms, Design Patterns, Technical Writing

**Data Processing & Visualisation**: numpy, pandas, Jupyter, matplotlib, seaborn **Programming**: Object-Oriented & Functional Programming, Python, Swift

Databases, Backend & Environments: MySQL, PostgreSQL, MongoDB, SQLAlchemy, Core Data, Flask, macOS, Linux (Ubuntu, CentOS)

SW Design & IDE Tools: PyCharm, Xcode, Sketch, pudb, vim. Test-driven development: xUnit, pytest.

#### CAREER SUMMARY

#### Python Developer (Contractor), August 2014 - current

- Works with programmers, data scientists, technical teams and product owners on diverse projects, authors technical articles on machine learning algorithms
- <u>In-commodities</u>. Developing a set of trading tools for data scientists and commodities traders
- <u>Windsor.ai</u>. Improved codebase tests coverage and eliminated bugs for toolset that analyses customer journeys and enables multi-touch attribution modelling to optimise client marketing budgets
- <u>Viziphi</u>. Developed a visualization tool for financial data plotting, leveraged knowledge of seaborn/matplotlib Python libraries to generate 2D image plots with critical financial information (loss/return heatmaps, confusion matrixes, etc.)
- <u>ZenVPN</u>. Ported and improved OpenVPN-based Windows VPN client to macOS, made adjustments to account for differences between platforms
- Klue. Developed a set of scripts, backend endpoints and ORM models for predictive food consumption system
- <u>Private Client/Entrepreneur</u>. Implemented a decision-tree based classifier for a tabular dataset classification for Proof-Oncept
- Whippletree Research. Analyzed medical treatment information dataset using various classification algorithms (Random Forests, SVM, Gradients Boosting)

Python Developer & Machine Learning Engineer (Contract), VectorScient, December 2015 - May 2018

• Developed a configurable machine learning pipeline with visualizing and reporting system to preprocess and classify database-stored e-commerce information for B2B e-commerce clients of Predictally, wrote package to predict future behavior from millions of transactions per client

#### Face Emotions Recognition System Engineer (Contract), December 2016 - March 2017

- Developed a model to classify human face emotions in Computer Vision during Udacity MOOC
- Authored a technical paper on software development and results verification

#### Python Developer, BASE Capital (Contract), May 2016 - March 2017

- Fixed scripts and increased speed of script execution by factor of 5, as verified by the product owner
- Improved and refactored legacy data processing codebase
- Developed a web UI to access CLI-based tools running loan volume prediction models.

### **EDUCATION & PROFESSIONAL DEVELOPMENT**

- Software Engineering, 5-years undergraduate degree, Surgut State University, Russia, September 2009 July 2014
- Artificial Intelligence Nanodegree, Udacity, September 2017 December 2017
- Machine Learning Engineer Nanodegree, Udacity, September 2016 April 2017
- CS188.1x Artificial Intelligence / edX, BerkeleyX, February 2015 May 2016.