Suvorov Aleksandr Yurievich

General information and link

Date of birth: Sep 7, 1986

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E-mail: yourmedstat@gmail.com
Web site with code samples (R / Python): https://aysuvorov.github.io/

Telegram: https://t.me/clinical_biostats (@clinical_biostats)
Github: https://github.com/aysuvorov/
Facebook: https://www.facebook.com/yourmedstat

ORCID profile: 0000-0002-2224-0019
SCOPUS profile: 57213827983
Google Scholar profile

Desired position

Associate professor / Assistant professor / Lecturer / Researcher / Data engineer / Data scientist

Education

- Medical doctor (2003-2009) - I.M. Sechenov First Moscow State Medical University
- PhD (2012-2015) - FBSI National Research Center for Therapy and Preventive Medicine Ministry of Health of the Russian Federation
- Data science with R track - DataCamp (2019)
- Data analyst with R track - DataCamp (2019)
- Network analysis with Python - DataCamp

Work experience and responsibilities

- **Senior statistician** (Apr 2021 - present) Sechenov University, Institute of Biodesign and Complex Systems Modeling
- **Biostatistician** (Apr 2020 - Sep 2022) - Feron LLC, pharmaceutical company, Moscow
- **Biostatistician** (Oct 2015 - Mar 2016) - Nadim CRO, pharmaceutical company
- **Researcher** (Jan 2012 - Mar 2016) - FBSI National Research Center for Therapy and Preventive Medicine Ministry of Health of Russian Federation

Competencies and skills

Programming skills

- Python, R, SPSS

GitHub repository with code samples

- https://aysuvorov.github.io/ - **Code samples and scripts** section

Design of experiments / biostatistics

- Trial design consulting;
- Sample size for various designs (pilot, RCT (superiority, noninferiority, multiarm, etc), nonRCT comparative, observational, registries), design simulations, bioequivalence, survival);
- Basic hypothesis testing and various statistical modelling (linear, nonlinear, repeated measures, mixed models, factor analysis,
  robust regressions, etc);
- Bootstrap and resampling techniques;
- Survival analysis (Cox, Weibull models, Kaplan–Meier estimator);
- Time series and time series modeling (ARMA, ARIMA, SARIMAX, etc);
- Various strategies for missing data;
- Meta analysis and Network metaanalysis;

Machine learning

- Data engineering (cleaning, preprocessing, transformations (scaling, power, Box-Cox, Min-Max, etc), various encoding strategies, etc);
- Dimensionality reduction (PCA, TSNE, NNMF, factor analysis, etc);
- Unsupervised learning (clustering)
- Supervised learning (linear models, discriminant analysis, Stochastic Gradient Descent, KNN, decision trees, random forest, bagging, gradient boosting methods, support vector

machines, robust regressions, LASSO, LARS, elastic-net, etc);
- Model selection and validation (cross validation, feature selection, various hyperparameter search algorithms, calibration);
- Pipelines and calibration;
- Survival prognostic modeling;
- Time series prognostic modeling (sktime, Prophet, etc)
- Neural networks (mainly PyTorch);

Network analysis

- Basic graph algorithms;
- Parenclitic, synolitic, correlation networks;
- Prognostic network modeling;

Key publications 2019 - till present

> Full list (60+ publications): https://disk.yandex.ru/i/xbvaaar_ITkdzQ

2022

- Morozov A., Bazarkin A., Babaevskaya D., Taratkin M., Kozlov V., **Suvorov A.**, Spivak L., McFarland J., Russo GI, Enikeev D. A systematic review and meta-analysis of placebo effect in clinical trials on chronic prostatitis/chronic pelvic pain syndrome. The Prostate. 2022; 1- 24. https://doi.org/10.1002/pros.24311
- Bestavashvili, A.; Glazachev, O.; Bestavashvili, A.; **Suvorov, A.**; Zhang, Y.; Zhang, X.; Rozhkov, A.; Kuznetsova, N.; Pavlov, C.; Glushenkov, D.; Kopylov, P. Intermittent Hypoxic-Hyperoxic Exposures Effects in Patients with Metabolic Syndrome: Correction of Cardiovascular and Metabolic Profile. Biomedicines 2022, 10, 566. https://doi.org/10.3390/biomedicines10030566
- Sushentsev, N., Rundo, L., Blyuss, O., Nazarenko, T., **Suvorov, A.**, Gnanapragasam, V. J., Sala, E., & Barrett, T. (2022). Comparative performance of MRI-derived PRECISE scores and delta-radiomics models for the prediction of prostate cancer progression in patients on active surveillance. European radiology, 32(1), 680–689. https://doi.org/10.1007/s00330-021-08151-x

2021

- Pogosova, N., Yufereva, Y., Sokolova, O., Yusubova, A., **Suvorov, A.**, & Saner, H. (2021). Telemedicine Intervention to Improve Long-Term Risk Factor Control and Body

Composition in Persons with High Cardiovascular Risk: Results from a Randomized Trial. Global Heart, 16(1), 21. DOI: http://doi.org/10.5334/gh.825

- Sagirova, Z.; Kuznetsova, N.; Gogiberidze, N.; Gognieva, D.; **Suvorov, A.**; Chomakhidze, P.; Omboni, S.; Saner, H.; Kopylov, P. Cuffless Blood Pressure Measurement Using a Smartphone-Case Based ECG Monitor with Photoplethysmography in Hypertensive Patients. Sensors 2021, 21, 3525. https://doi.org/10.3390/s21103525
- Afina A. Bestavashvili, Oleg S. Glazachev, Alexander A. Bestavashvili, Ines Dhif, **Alexander Yu Suvorov**, Nikita V. Vorontsov, Denis S. Tuter, Daria G. Gognieva, Zhang Yong, Chavdar S. Pavlov, Dmitriy V. Glushenkov, Elena A. Sirkina, Irina V. Kaloshina, Philippe Yu Kopylov. The Effects of Intermittent Hypoxic–Hyperoxic Exposures on Lipid Profile and Inflammation in Patients With Metabolic Syndrome. Frontiers in Cardiovascular Medicine. 2021, 8, https://doi.org/10.3389/fcvm.2021.700826

2020

- *ESC Congress 2020*. Safety and efficacy of rivaroxaban compared to warfarin in patients with atrial fibrillation and advanced stages of chronic kidney disease. ID 87798. E-poster session. M.Chashkina, D.Andreev, N.Kozlovsaya, Z.Salpagarova, A.Bykova, **A.Suvorov** et al.
- E Karev, S Verbilo, E Malev, M Prokudina, **A Suvorov**, Global longitudinal strain and left ventricle dyssynchrony changes during stress echocardiography in response to antihypertensive treatment optimization, European Heart Journal - Cardiovascular Imaging, Volume 22, Issue Supplement_1, January 2021, jeaa356.206, https://doi.org/10.1093/ehjci/jeaa356.206
- E Karev, S Verbilo, E Malev, M Prokudina, **A Suvorov**, The influence of afterload on left ventricular contractility: 2D-strain and dyssynchrony in stress echocardiography, European Heart Journal - Cardiovascular Imaging, Volume 22, Issue Supplement_1, January 2021, jeaa356.192, https://doi.org/10.1093/ehjci/jeaa356.192

2019

- *EuroEcho Congress 2019*. “Non-invasive risk assessment of the left atrial appendage thrombosis using deep learning methods”. (Suvorov A.Y., Melik - Ogandzhanyan G.Yu., Dmitrieva E.V., Voskresenskaya N.V., Kruglov A.A.). Abs. 90310., Rapid Fire Session.
- *Acute Cardiovascular Care Congress 2020*. Predicting short-term outcomes in patients with acute coronary syndrome using a variety of artificial intelligence models in real

clinical practice. E-poster presentation.