

VYACHESLAV BARYSHEV

research on the application of RL in architecture and urban planning

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EXPERIENCE

Chief Specialist of Urban Planning

Institute of the General Plan of Moscow

⌚ Janry 2022 – Ongoing

📍 Moscow

- scientific research work;
- creation of domain-specific datasets, before training generative SD + LoRA models;
- data/geo-location processing, creation and orchestration of ETL processes;
- design and programming of PostgreSQL/PostGIS spatial databases (conceptual, logical, physical model);
- development of client applications for databases (PyQt, PyQGIS);
- development of plug-ins for qgis;
- web application development, web mapping;
- creation of programming API interfaces, including for integration with qgis plugins;
- mathematical modeling of traffic/pedestrian flows;
- preparation of analytical reports, modeling and forecasting;
- development of machine learning models (classical ML, DL, RL);
- model implementation (inference, model monitoring);
- participation in the development of corporate software products and their testing (plug-ins, individual applications);
- development of methodology, publication of scientific articles, participation in conferences;
- support of the activities of production units

Architect-Lead Architect

PIK and andere company

⌚ Month 2008 – 2022

📍 Moscow

- urban planing
- AR concept
- bim template and coordinire
- work dokument AR
- Project AR
- Architeckter Interior

LANGUAGES

Russia



German



English



MOST PROUD OF

🏆 Generation and optimization of the architectural appearance of buildings using diffusion models trained by the RLHF method

❤️ Development of applications for inference of ML models in QGIS

❤️ Architectural design and development of urban planning concepts, development of mathematical models

STRENGTHS

Hard-working

Eye for detail

Motivator & Leader

Innovation-friendly

C++ Python

PostgreSQL& Postgis

Docker Apache Sparck

Apache Airflow Kafka & RabbitMQ

Apache Superset & Datalens

Embedded Systems

Statistical Analysis Probability Theory

EDUCATION

M.Sc. Applied Mathematics and Computer Science

National Research Nuclear University "MEPhI",

⌚ Sept 2024 – June 2026

Sp. Architecture

State University of Land Management

⌚ Sept 2007 – June 2011

Sp. Management of organizations

Moscow State University of Design and Technology

⌚ Sept 2002 – June 2007

PUBLICATIONS

Journal Articles

- BaryshevV.V., "Micro-modeling of pedestrian flows to traffic concentration points," *ARCHITECTURE AND CONSTRUCTION OF RUSSIA*, vol. 2, 2024.
- B. MarkusM.V., "The impact of remote work on the organization of settlements and the principles of implementing the concept of a 15-minute city in a metropolitan suburb," *ARCHITECTURE AND CONSTRUCTION OF RUSSIA*, vol. 2, 2024.
- BaryshevV.V., "Social groups in the formation of demand for the services of transport systems," *INNOVATION AND INVESTMENT*, vol. 7, 2023.
- BaryshevV.V., "Synthetic populations in the formation of urban areas," *ARCHITECTURE AND CONSTRUCTION OF RUSSIA*, vol. 2, 2023.

Conference Proceedings

- BaryshevV.V., "Forecasting the attendance of public spaces based on the bayesian network and updated data streams," in *Current aspects of urban planning. New Philosophy of Urban Development*, Moscow, Russia, 2025.
- BaryshevV.V., "Digital methods of urban planning analysis in the formation of scenarios for the development of pedestrian space," in *SCIENCE, EDUCATION AND EXPERIMENTAL DESIGN Abstracts of the international scientific and practical conference of faculty, young scientists and students on April 4-8*, Moscow, Russia, 2022.

REFEREES

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