Vitalii Urbanevych
Curriculum Vitae

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Education

2018–present **Doctor of philosophy**, *Department of Theory of Nuclear Systems*, Jagiellonian University, Kraków.
An application of Chiral forces to electromagnetic nuclear reactions.

2015–2017 **Master of Science**, *Physics of nucleus and high energies*, ONPU, Odessa.
with honours
Study of a theoretical model of Traveling Wave Reactor. Looking for special stationary regimes of operation for such a reactor.

2011–2015 **Bachelor of Science**, *Physics*, ONPU, Odessa.
with honours

Selected courses
- Introduction to Data Science
- Advanced Statistics: Bayesian analysis and other selected topics *(With practice on Python)*
- Python programming in physics and biophysics
- Relativistic heavy ion collisions

Experience

2019 - present **Scientific Researcher**, *SiFi-CC group - Jagiellonian University*, Kraków.
part-time
Developing a method for online monitoring of a cancer treatment called proton therapy.
- Monte-Carlo simulations with Geant4
- Geometry set-up optimization

2019 - 2021 **Software Engineer**, *Instytut Fotonowy*, Kraków.
part-time
- Writing software for automatic calibration of the device applying machine learning techniques.
- Writing GUI for operation with the device.
- Natural Language Processing(NLP).
  - Text database processing
  - Word-to-vector
  - Text classification

Feb. 2017 - Aug. 2017 **Junior Research Associate**, *ONPU*, Odessa.

Miscellaneous

2018–2021	**Teaching Assistant**, *Jagiellonian University*, Kraków.

- Laboratory classes for Biophysics students.
- Led practical classes of the course "Statistical Methods" for non-stationary students from "Applied informatics".
- Led practical classes of the course "Medical Statistics" for Biophysics students.
- Preparing statistical web applets for students' practice (in Javascript).

2017–2018	**Private tutor**, Odessa.

I helped students of the secondary school to understand Physics and Mathematics

Languages

Russian	Native	English	B2
Ukrainian	Native	Polish	A2-B1

Skills

Python	NumPy, pandas, scipy, sklearn etc.	Git	Github, Gitlab
Programming languages	C++, Fortran, Javascript(basics)	Linux	vim, ssh, etc.
Data processing	Matlab/Octave, matplotlib+NumPy, Gnuplot		
Other	Wolfram Mathematica, LaTeX, Geant4, ROOT CERN		
	Strong mathematics and statistics background		

Professional interests

Research	Nuclear physics, numerical simulations, mathematical analysis
Other	AI, machine learning, data science, problem solving

Interests

- Chess
- Climbing
- Guitar
- Books
- Mountaineering

Online-courses

2021	**"Advanced Python", "NLP with Python for Machine Learning Essential Training", "Data Visualizations with Plotly"**, LinkedIn.
2020	**Python: basics and application**, Stepic(in Russian).
	with honours
2020	**Introduction to Deep Learning**, Coursera.
	with honours