

# 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

- 2021 - present **Junior NLP Engineer**, *SAMSUNG POLAND R&D*, Kraków  
Working in Automatic Speech Recognition team developing voice assistant.
  - Development and maintaining voice recognition models (training Neural Networks)
  - Writing automation scripts (Python, Bash)
  - Fixing defects in voice recognition models (regex, data analysis)
- 2019 - present **Scientific Researcher**, *SiFi-CC group - Jagiellonian University*, Kraków  
*part-time*  
Developing a method for online monitoring during proton therapy with Coded-mask approach.
  - Investigation and optimisation of the geometry parameters
  - Simulations with Geant4 (development, optimization and processing)
  - Development of image reconstruction tools (using MLEM algorithm)
  - Processing the data from experimental measurements

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 - **Junior Research Associate**, *ONPU*, Odessa

Aug. 2017

## Miscellaneous

2018–2022 **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.	Programming	C++, Fortran, Javascript(basics)
Linux	bash, regex, vim, ssh, ...	Other	Git, JIRA, Matlab/Octave, Mathematica, gnuplot, ROOT

## Professional interests

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

## Interests

- |            |                  |
|------------|------------------|
| ○ Chess    | ○ Books          |
| ○ Climbing | ○ Mountaineering |
| ○ Guitar   | ○ Volleyball     |