



## Mikhail Simonov

🌐 simonov.cc

📍 Seoul, South Korea

📅 27 years old: October 28, 1997

🗣️ English (C1), Russian (native), Portuguese (A2), Spanish (A1)

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## EDUCATION

- **Saint Petersburg Academic University** *September 2020 - June 2022*  
*Master of Science, Algorithmic Bioinformatics* GPA: 3.45 / 4.00
- **Novosibirsk State University** *September 2015 - June 2020*  
*Bachelor of Science, Chemistry* GPA: 3.16 / 4.00

## EXPERIENCE

- **Freelance Python & Bash Developer** *October 2022 - present*  
*Independent Contractor* 📍 Worldwide
  - Designed and implemented custom automation scripts using Python and Bash
  - Developed data processing pipelines and automation tools to handle large datasets
  - Created and optimized Bash scripts for system administration tasks
- **Anles Ltd** *October 2021 - September 2022*  
*Cheminformatics researcher, chemical technologist* 📍 Saint Petersburg, Russia
  - Conducted QSAR modeling, predicted thermodynamic properties of small molecules
  - Executed multistage organic synthesis of polyfluorinated compounds
  - Purified compounds through extractive distillation
- **Boreskov Institute of Catalysis** *March 2018 - June 2020*  
*Laboratory chemist, junior researcher* 📍 Novosibirsk, Russia
  - Performed organic synthesis and researched ionic liquids and homogeneous catalytic systems
  - Processed and interpreted GC-MS and NMR spectra

## PROJECTS

- **Algorithmic Trading Project** *October 2023 - present*  
*Independent Project*
  - Developed a profitable algorithmic trading strategy focused on exploiting fair value gaps in the cryptomarket
  - Integrated APIs for real-time market data collection and automated trading execution
  - Backtested strategies on historical market data to ensure profitability and mitigate risks
- **Assessment of reproducibility of computational genomic tools** *January 2022 - present*  
*Bioinformatics research - publication under preparation, The Mangul Lab*
  - Ran and processed output from 8 genomic read alignment tools
  - Simulated sequencing reads with different error profiles
  - Created reproducible workflows with Python and Bash scripting
  - Tools & technologies used: Python, bash, Pandas, FastQC, SAMtools, BWA, Bowtie, etc
- **Prediction of polymerase activity of  $\Phi$ 29 DNA polymerase** *December 2020*  
*Bioinformatics hackathon*
  - Developed an accurate ML-based algorithm aimed at the determination of a specific enzyme
  - Tools & technologies used: Python, Keras, BioPython, Scikit Learn

## TECHNICAL SKILLS AND INTERESTS

**Languages:** Python, R, Go, bash, HTML, CSS, TeX

**Environments:** Unix/Linux systems, HPC environments

**NGS assays:** RNA-seq, DNA-seq, single cell RNAseq, ChIP-seq

**Bioinformatics Tools:** Read aligners (BWA, ngm, etc), SV Tools (Manta, PopDel, BreakDancer), raw data QC, etc

**Biochemical Techniques:** Paper chromatography, TLC, column chromatography, spectrophotometry

**Statistics:** Hypothesis testing, regression modeling, high dimensional data analysis, machine learning

**Databases:** Knowledge of SQL and basic database architecture

**Soft Skills:** Teamwork, time management, adaptability, flexibility

**Areas of Interest:** Drug design, data science, computational biology, finances, crypto

## HOBBIES AND OTHER SKILLS

**Sports:** Chess (average level, ELO 1600), Tennis (intermediate player)

**Musical instruments:** Piano (7 years of music school)

**Other activities:** Video editing, hiking, reading non-fiction