

# Aidin Biibosunov

## Curriculum vitae

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### Education

- Oct 2019 – Dec 2022** – **M.S. in Mathematics**, *Technical University of Munich*, Munich, Germany  
Thesis: Deep Learning Empowered Analysis for High Content Screening ([link](#))
- Sep 2017 – Nov 2018** – **Completed coursework towards M.S.**, *Novosibirsk State University*, Novosibirsk, Russia  
In program: Physics of atoms and molecules
- Sep 2013 – Jun 2017** – **B.S. in Physics**, *Novosibirsk State University*, Novosibirsk, Russia  
Thesis: High precision quantum chemical calculations of kinetics of primary reactions of thermolysis of nitroalkenes

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### Experience

- Mar 2022 – Sep 2022** – **Research assistant**, Institute for Medical Microbiology, Immunology and Hygiene of TUM  
Machine learning (ML) methods in biology
  - worked with high dimensional data
  - associated Bulk RNA-Seq data with various clinical outcomes of experiments with miceAdvisor: Ph.D Atefeh Kazeroonian
- Apr 2021 – Aug 2021** – **Research assistant**, Helmholtz AI  
Deep learning in High Content Screening (HCS) analysis
  - reproduced *these* results
  - used metric learning to classify microscopy cell imagesAdvisor: Ph.D Tingying Peng
- Jan 2021 – Mar 2021** – **Internship**, Helmholtz Zentrum München  
Contributed to the implementation of scGen model into *scArches*  
Advisor: Mohammad Lotfollahi
- Nov 2020** – **Computational Pathology**, *Technical University of Munich*  
Seminar at the department of mathematics
  - read and presented the *paper*
  - reproduced the resultsAdvisor: Sophia Wagner

**Oct 2016** – **Lab assistant**, *Voevodsky Institute of Chemical Kinetics and*

**Nov 2018** *Combustion*, Laboratory of Mechanisms of Reactions

- designed and performed experiments (computer simulations)
- wrote reports

Advisor: Vitaly G. Kiselev

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## Teaching

**Oct 2022** – **Teacher**, *School 84*, Bishkek

**Nov 2022** I taught 8th grade physics in the first quarter - Thermodynamics ([link](#))

- prepared homeworks and tests
- wrote class notes

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## Skills

- Programming Languages: Python (NumPy, Pandas, PyTorch), R, Java, Matlab, SQL
- Tools: Git, Emacs, L<sup>A</sup>T<sub>E</sub>X

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## Conferences

**Apr 2018** – **56th International Scientific Student Conference**

Theoretical study of the new thermal decomposition channels of aliphatic and aromatic nitro compounds

**Apr 2017** – **55th International Scientific Student Conference**

Theoretical study of the kinetics and mechanisms of thermolysis of new high-energy compounds

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## Awards & Scholarships

- Sep 2013: Full-tuition scholarship with stipend for undergraduate studies
- Feb 2013: Russian Board of School Olympiads, Prize Winner in Physics

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## Languages

- English: Fluent
- German: Beginner
- Russian: Fluent
- Kyrgyz: Native