

# ALEXANDER KOVRIGIN

Bremen, Germany

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## EDUCATION

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- **Constructor University** Sept. 2022 - Expected Aug. 2024  
*Bachelor of Computer Science* *Bremen, Germany*
- Transferred from:
  - **Higher School of Economics** Sept. 2021 - Aug. 2022  
*Bachelor of Applied Mathematics and Computer Science* *St. Petersburg, Russia*

## EXPERIENCE

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- **JetBrains Research** Nov. 2023 - Present  
*ML Research Intern* *Remote*  
NLP Research
  - Working on **context retrieval strategies for code editing** using LLMs
  - Leveraging graph-based reasoning techniques for better retrieval
- **Constructor University** Sep. 2023 - May 2024  
*Teaching Assistant* *Bremen, Germany*  
Mathematics Teaching
  - Held **weekly seminars for Analysis and Linear Algebra** courses
  - Came up with challenging problems for practice
  - Engaged with students about mathematical concepts
- **Huawei Munich Research Center** June 2023 - Aug. 2023  
*Intern* *Darmstadt, Germany*  
C++ PyTorch
  - Collaborated to enhance the efficiency of a **privacy-preserving machine learning framework**
  - Leveraged CPU/GPU PyTorch backends to optimize performance
  - **Achieved a twofold increase in the model execution speed**

## PROJECTS

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- **Learning to Discover Conservation Principles** Jan. 2023 - May 2023  
Deep Learning Research
  - Collaborated on a **research project focused on finding conservation laws** under direct guidance of Andrey Ustyuzhanin (h-index 125)
  - Applied **deep learning methods** to extract conservation principles from experimental data, aiming to improve system integration robustness and simplify equations
  - Our research **published in Q1 journal**: [doi.org/10.1088/2632-2153/ad4a20](https://doi.org/10.1088/2632-2153/ad4a20)
- **Cavoke** Jan. 2022 - June 2022  
C++ Qt Docker SQL
  - Developed a **framework for creating and hosting turn-based board games**
  - Devised integrated solutions for game development challenges: game state persistence, liaison between client and server, user authentication, multiplayer support, etc.
- **Wikirace** Dec. 2021  
Python Django Heroku Websockets
  - Developed an **online single-/multiplayer game** about traversing links from one Wikipedia page to another
  - Incorporated asynchronous websockets for seamless multiplayer gameplay

## ACHIEVEMENTS

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- **ICPC Northwestern Europe Regional Contest (NWERC) — Silver Medal, 150 teams** Nov. 2023  
Algorithms C++ Teamwork *Delft, Netherlands*
- **International Mathematics Competition — First Prize, top 10%, 390 contestants** Aug. 2023  
Mathematics Problem-solving *Blagoevgrad, Bulgaria*

## SKILLS

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- **Programming languages:** C++, Python, Java, Kotlin, Typescript, Haskell
- **Technologies:** Terraform, Docker, L<sup>A</sup>T<sub>E</sub>X, SQL
- **Languages:** English (C1), German (C1), French (A2), Russian (Native)