

# BADERKO MAKAR

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## ABOUT ME

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As a passionate 16-year-old Software Engineer, I leverage my interdisciplinary expertise in computer science, economics, and physics to bridge diverse perspectives and ideas of my colleagues in order to foster collaborative synergy and drive innovative solutions for impactful outcomes.

## SKILLS

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**Technical Skills** Python, C++, SQL, Classic ML, Computer Vision, Gradient Boosting, Deep Learning with PyTorch, Data Mining, LLM fine-tuning and Stochastic Optimization  
**Languages** Russian - mother tongue, English - C1 (cambridge certificate), German - B1, Italian - A1  
**Interests** Foreign languages, mechanical engineering, reading and videography

## WORK EXPERIENCE

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### **Biometriclabs**

Backend Developer

(July 2023 - August 2023)

- Created a high-performance codebase to connect the mathematical models written in C with the existing UI and the database of reports from sensors.

### **Biometriclabs**

Embedded Developer

(June 2021 - August 2021)

- Built prototypes of innovative products with the Raspberry Pi, collected human heart rate data and converted it into the required digital format.

Granted direct admission to internships in ML at largest russian banks (Sber and Tbank) for winning top corporate ML competitions (interview waived).

## RESEARCH

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- Exploring Applications of State Space Models and Advanced Training Techniques in Sequential Recommendations: A Comparative Study on Efficiency and Performance - *ICOMP 2024*

## ACADEMIC ACHIEVEMENTS

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- National Statistics and Data Analysis Olympiad - Gold(2022), Silver(2023) and Gold(2024)
- National Technological Olympiad in Artificial Intelligence - Gold(2025)
- Candidate into the Russian National Team on the International Olympiad in AI
- Various medals in nation-level competitions in Physics, Mathematics, Economics and English Language
- Secured eligibility for merit-based admission to Russia's top-tier universities (MIPT, HSE, ITMO, BMSTU), with no entrance examinations required due to exceptional academic performance
- AIJ Junior Contest Winner (1st place), Computer Vision case (2023)

## EDUCATION

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### **Offline Studies**

- Summer competitive programming training at MIPT  
During this intensive course I learned dynamic programming, graph traversals, data structures and combinatorics. Placed 2nd in a final team-based algorithms competition.
- Sirius.AI 2023 Computer Vision Intensive Course, placed 1st in a team-based project competition.
- A year-long Data Structures and Algorithms course at Yandex, Russia's largest IT company  
During this course I was able to enhance technical proficiency in competitive problem-solving.