Tsarakhova Milena

https://github.com/MilenaTss

Email : mvtsarakhova@edu.hse.ru

Mobile : +7-918-705-87-94

EDUCATION

- **Higher School of Economics**   Moscow, Russia
  Software Engineering   *Sept 2021 – Jun 2025*

SKILLS

- **Programming Languages**: : C++, Python, Java, SQL
- **Libraries**: : SQLite, SQLAlchemy, BeautifulSoup, Requests, Pygame, Selenium with Python
- **Frameworks**: : Flask

PROJECTS

- **Tic-Tac-Toe-AI (Java)**:
  This is a tic-tac-toe game console application on Java. Users can play with a computer or with another user, or they can watch the game of two computers. The computer will have three levels of difficulty — easy, medium, and hard.
  Easy difficulty means that the computer makes random moves.
  When the AI is playing at medium level, it wins when it can and stops attempts to beat it with one move.
  At a hard level, it can calculate all possible moves that might be played during the game, and choose the best one. The algorithm that implements this is called *Minimax*.
  In this project I use patterns *Factory Method and Abstract Factory*.

- **Minesweeper (Java)**:
  This is a Minesweeper game console application on Java. At the beginning of the game, the user selects the number of mines on the 9x9 field. After that, the user searches for mines on the field. Users can mark cells as potential mines and they can explore cells.
  When the user explores one cell and the cell is empty and has no mines around, all the cells around it, including the marked ones, can be explored. And all explored cells around will be shown.
  The game ends when all cells with mines are marked, or all the safe cells explored.

- **Delivery service REST API (Python)**:
  Implemented a REST API delivery service. It is possible to hire couriers, create orders, distribute orders to couriers, and also find out information about the courier like salary, rating, etc.
  Also were written extensive tests.
  Framework - Flask
  Database - SQLAlchemy

- **Chatbot VK (Python)**:
  A parser was written for the kinopoisk website. The parser searches for movie data and saves it to the database.
  VK API is used to create a chat bot. The bot has buttons in the functionality that you can use to select the type of movie and request a link and description for it.
  Libraries: BeautifulSoup, Requests, SQLite

- **Markov Chain text generator (Python)**:
  In this project, I use chains of length 2 and length 3, to create data for which you can create texts. Accordingly, the generator based on chains of length 3 works much better, because they take into account a lot more options.
  You can submit any file to the generator, on the basis of which it will create new sentences.
  Libraries: nltk, collections

ACHIVEMENTS

- **Olimpiads**: MIPT School olympiad in mathematics - prizewinner   *2019*
- **All-Russian School olympiads**: Winner of regional stage in computer science, prizewinner of regional stage in mathematics   *2019*

ACTIVITIES

- **Teaching**: Worked as a teacher of Olympiad mathematics for 3 – 7 grades   *Feb 2021 – Aug 2021*
- **Tinkoff Course**: QA Engineer   *Apr 2021 – Aug 2021*