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Education

- **National Research University Higher School of Economics** Moscow, Russia
  Bachelor of Science in Applied Mathematics and Informatics. *2016 – 2020*

Relevant courses

- **Computer Science**: Algorithms and Data structures, Operating Systems.
- **Mathematics**: Linear Algebra and Geometry, Discrete mathematics, Calculus, Probability Theory and Mathematical Statistics.

Projects and experience

- **Speech analytics for Heedbook (Python (Data analysis libraries))** **In process**
  A service which does semantic analysis of speech to determine emotions of a client in real time.
  - **State**: Working on getting correct words time stamps from audio using speech-to-text service.
  - **Done**: Tool to approximate split audio into words. The idea is to analyse values of audio and to detect pauses in speech. Tool to analyse rate of speech in audio.

- **FindPet VK Bot (Python (Flask, Requests, SQLite))** **In process**
  A bot for VK social network, that finds your lost pet, or helps you to return one to the owner.
  - **State**: Made a prototype using Flask. Implemented a dialogue system and text processing module. Bot can parse and save pets descriptions and users contacts from the chat. Finds matches between similar pets and writes to the owner and person who found the pet about matching.
  - **GitHub**: FindPet (with Vladislav Kozhemiakin)

- **AR.Drone 2 autopilot (C++ (OpenCV, ROS) / Python (PyQT, ROS))**
  The software that allows the quadcopter to recognize, track and follow a clearly marked target.
  - **Computer vision**: Implemented an OpenCV algorithm, which selects the target of the specified colour and finds its coordinates in the video stream fetched from the drone.
  - **Controller**: Developed and tuned a PD controller to make the drone follow the target.
    Used ROS and ardrone_autonomy library.
  - **Keyboard Control**: Integrated a switch, that can change drone control from the manual to the autopilot by pressing a button. Used PyQT and ROS.
  - **GitHub**: ardrone_autopilot

- **Mobile game "Shariky" (Java (libgdx))**
  App for Android that trains your attention and reaction. The goal of the game is to burst falling balls in the right places.
  - **General features**: Made from scratch. Variety of balls with different effects. Increasing game complexity.
  - **Image**: The amount of used memory reduced due to texture filters (linear, mipmap), texture atlases and regions.
  - **Control**: Implemented a multiple cases handler to process clicks on different objects.
  - **GitHub**: Shariky

Skills

- **Languages:**
  - **Main languages**: Python, C++.
  - **Some experience**: C, Java, HTML, CSS, JavaScript.
- **Technologies and software:**
  - **Libraries**:
    - **Python:** numpy, pandas, scipy, matplotlib, sklearn, seaborn, xgboost, CatBoost.
    - **C++:** OpenCV, ardrone_autopilot, STL.
    - **Java:** libgdx.
  - **Other**: Linux, Git, ROS, Gazebo, Vowpal Wabbit.