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Michael Solotky

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EDUCATION

- **Master of Science** in **Applied Mathematics and Informatics**, GPA 3.90 / 4.0   *Sep 2019 – Jun 2021*
  Higher School of Economics : Faculty of Computer Science
  Joint programme with **Yandex School of Data Science**
- Bachelor of Science in Applied Mathematics and Computer Science, GPA 3.89 / 4.0   *Sep 2015 – Jun 2019*
  Lomonosov Moscow State University
  Faculty of Computational Mathematics and Cybernetics

EXPERIENCE

- **Software Development Engineer at Amazon**   *Aug 2021 – Present · 1yr*
  Alexa TextToSpeech `C` `C++` `Python` `Bash` `Perl` `CI/CD`
    - **Reduced latency** of a Deep Learning model for homograph disambiguation by **56%**
    - **Urgently fixing bugs** with wrong pronunciation helping to **deliver projects on time**
    - Extended functionality of an internal library for integration testing in
      Speech Synthesis **making it simple** to execute various new testing scenarios
- **Research Science Intern at Yandex** `PyTorch` `NumPy` `Pyplot` `LaTeX`   *Sep 2020 – Jun 2021 · 9mo*
    - Comparing existing methods for **uncertainty estimation** on large-scale tasks
    - Finding **theoretical foundations** for various methods of uncertainty
      estimation in **Deep Learning**
    - **Results** are described in the **Master's thesis**
- **Machine Learning Engineer Intern at Yandex**   *Jun 2019 – Sep 2019 · 3mo*
  Machine Translation department `TensorFlow` `MapReduce` `SciPy` `Pyplot`
    - Conducted experiments to improve quality and diversity of translations
    - Analyzed baseline approaches and found some basic mistakes that they make
    - **Increased quality and diversity** by internal company's metrics and by
      commonly used machine translation metrics: **10% of max-BLEU growth**
      and about **60% of self-BLEU diversity growth**
    - Implemented several models in company's internal machine learning library
- **Software Engineer Intern at Yandex**   *Jun 2018 – Oct 2018 · 3mo*
  Voice Technology department `C++` `Python` `MapReduce` `Protobuf`
    - Implemented several methods of probability smoothing in language models for
      Automatic Speech Recognition
    - Conducted experiments on quality measurement to find the best model among all
    - Implemented an optimal algorithm for training n-gram language models in C++ using
      MapReduce which **reduced training time by 3 times and slightly increased quality**

PROJECTS

- **BigARTM** `C++` `Boost` `Protobuf` `Travis CI` `AppVeyor`   *Jan 2017 – Jun 2018*
  Open Source library for topic modelling
  Developed a tool for parallel calculation of pairwise word statistics (**code sample, documentation**)

SKILLS

- **Languages**: C++, Python, C, Bash, Perl
- **Deep Learning frameworks**: PyTorch, TensorFlow, Keras
- **Technologies/Libraries**: MapReduce, Protobuf, C++ Boost, Make, NumPy/SciPy, Sklearn, Pandas, CVXPY
- **Tools**: Git, UNIX/Linux, GDB, Docker, LaTeX, Deployment Pipelines (CI/CD), Travis CI, AppVeyor