Abduragim Shtanchaev

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Education

- **Skoltech** — Moscow, RU
  M.Sc. in Information Systems and Technology, GPA: 3.92/4.00 — *May 2020*
- **University of Turkish Aeronautical Association UTAA** — Ankara, Turkey
  B.Sc. in Mechatronics Engineering, GPA: 3.35/4.00 — *July 2018*

Work & Research Experience

- **O.Vision** — Saint Petersburg, RU
  Research Data Scientist — *January 2021 - Current*
  - **Recognition**: Developing fast facial recognition systems for entry access and payments systems
  - **Detection**: Developing fast facial detection algorithms for deployment on edge devices
  - **Image Quality Assessment**: Developing image quality assessment algorithms for fast facial recognition systems
  - **Model Deployment**: Deploying models on edge devices - what's point you can't deploy that which you have developed :)? After all - the fruit of knowledge is action upon it
- **NeurodataLab LLC** — Moscow, RU
  Research Data Scientist — *April 2020 - September 2020*
  - **Ad Power**: Developed predictive models for ad recall predictions based on the emotional state of respondents, media coverage of ads, and information about ads.
  - **Data Collection & Prepossessing**: Developed data prepossessing pipelines for ad recall prediction models from a scratch
  - **Paper**: Contributed to a paper on ad recall prediction
- **German Orbital Systems** — Berlin, GE
  Research Intern — *Summer 2019*
  - **ADCS**: Developed testbed for Attitude Determination and Control System for small cubesats satellites. The control system enables small satellites to control attitude and tilt using only magnetorquer. For more details
- **Skoltech** — Moscow, RU
  A list of valuable projects accomplished as an M.Sc. student — *2018 - 2020*
  - **Iris Flower Classifier Deployment**: Created a web service for Iris Flower classifier using Flask and Docker. Deployed on AWS. Code
  - **Optimizing GANs using non-classical optimizers**: GANs are known as "difficult to train" for various stability reasons. We used non-classical optimizers in deep learning to remedy the problem. Implemented and tested on GANs using Pytorch following optimizers: Gradient Sliding, Ellipsoid, and Quick prop. Code and presentation
  - **Camera Trajectory Estimation**: Implemented a model for estimating the trajectory of a framing camera using RGB-D images and classical computer vision techniques. Wrote a blog on medium about the project. Source code
  - **Recybot**: A project in collaboration with the Department of Mechanical Engineering at MIT under Prof. Kamal Youcef-Toumi and Skoltech Robotics lab. Built screw detection model for automated e-waste disassembly - recybot. More about project here
- **University of Turkish Aeronautical Association** — Ankara, TU
  A list of valuable projects accomplished as a B.Sc. student — *2014 - 2018*
  - **Sumo Robot**: Built and programmed a Sumo Robot using Arduino and other components to participate in a competition. Took a part but did not take over :)
  - **CNC 3D Printer**: Built and programmed a CNC machine for 3D printing
  - **Drone Controller**: Developed mathematical model for controlling position, velocity and acceleration of a drone. Tested the algorithm in a simulated environment(due to budged restrictions :))

Other Projects

- **Automated Forest Inventory Using Satellite Images**
  M.Sc. Thesis advised by Prof. Anton Ivanov
  - **Python**: Developed a semi-supervised approach for tree crown classification in boreal forest using World-View2 satellite imagery with a low spatial resolution - 0.5m/pix. Presented at IAC conference. The full thesis and code
- **Pipeline Inspection Robot - PIG**
  B.Sc. Thesis advised by Prof. Habib Ghanbarpourasl
  - **C++**: Odometery calculation in wheel slippage cases. Developed and tested an algorithm for a robot odometry using camera assistance in the cases when wheel slippage is present.

Achievements

2020	**Competed SMILES**, selected 10% applicants. Certificate	Moscow, RU
	Graduated with High Honors from Skoltech	
2018	**Prestigious Full Scholarship** at Skoltech for M.Sc, selected from 3k+ (<1 %)	
	Graduated with Honors from UTAA	Ankara, TU
2013	**Full Scholarship** for B.Sc. at UTAA	
	Graduated with High Honors from Liceum	Makhachkala, RU
2011	**Ranked 4th** in Russian Regional History Olympiad	

Skills & Interest

Strong	♥ **Python** ∘ ♥ **Vim** ∘ ♥ **Pytorch** ∘ bash/zsh ∘ git
Normal	Java ∘ **C++** ∘ SQL ∘ **Language is not problem after all**
Familiar	Tensorflow ∘**Keras** ∘ mxnet ∘ HTML ∘ C ∘ Jekyll ∘ Docker ∘ Flask