

Radmir Sultamuratov

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EDUCATION

University of Houston	Houston, TX
Ph.D. in Applied Mathematics	2020 – 2024
Wayne State University	Detroit, MI
M.S. in Mathematics	2018 – 2020
Kazakh National University	Almaty, Kazakhstan
B.S. in Mathematics	2005 – 2009

SKILLS

Programming: Proficient: Python, Matlab. Experienced: R, C++

Machine Learning: PyTorch, TensorFlow/Keras (*Certified*), TorchScript, OpenCV, Scikit, OpenMMLab, Mediapipe, transfer learning, data augmentation, model deployment

Computing Software: ANTs, MALPEM, ShapeLDDMM

DataOps: pandas, spark, SQL, git, SLURM, bash, GCP, docker, vscode/remote, omp, multiprocessing, labelme, slicer

Relevant coursework: Optimization, Probability & Statistics, Spatial Analysis, Numerical Methods, Deep Learning, Data-Driven Algorithms, Statistical Data Analysis, High-Performance Computing, Linux/Cluster Computing

SELECTED WORK EXPERIENCE

University of Houston	Houston, TX
Graduate Research - Part time	2021 – present
<ul style="list-style-type: none">• Proficient in computer vision, machine learning algorithms, and quantitative analysis• Highly experienced in registration, classification and segmentation of medical images (nifti/dicom)• Achieved 97.5% accuracy on cardiac diagnosis classification using Diffeomorphic Registration and Random Forest• Implemented DL models as VoxNet, PointNet, Autoencoders for analysis of 2D/3D MRI images/series• Performed image processing tasks including coarsening, refinement, inpainting, PCA alignment, histogram equalization, ICP registration and etc.	
Aikynetix	Houston, TX
Machine Learning Engineer - Internship	Summer 2022
<ul style="list-style-type: none">• Built an API for face detection and face tracking application using MMpose and OpenFace toolboxes• Automated and standartized ML model retraining pipeline on GCP/VertexAI cloud machine• Tested and integrated pose and object detection models, such as ResNet, YOLOv, and TCFormer, into the application• Built and trained custom NN model for physical parameter estimation with 98% hold-out accuracy using PyTorch	
Securian Financial	Minneapolis, MN
Quantitative Research - Internship	Summer 2020
<ul style="list-style-type: none">• Implemented quadratic interpolation for Delta/Rho variables producing 3-5% rel.error of approximation• Worked on solutions of reducing the computational cost of the Greeks estimation for intra-day options trading	
Innovation High School	Almaty/Aqtau, Kazakhstan
Math Instructor, Competitive Coach - Full time	2009 – 2018
<ul style="list-style-type: none">• Taught regular and competitive disciplines such as Number Theory, Combinatorics, Projective Geometry, etc.• Aided 100+ students in achieving accolades on national/international competitions• Received an Honorable Mention from the Minister of Education	

PUBLICATIONS

1. *Automatic classification of deformable shapes*, doi:[10.48550/arXiv.2211.02530](https://doi.org/10.48550/arXiv.2211.02530)
H. Dabirian, R. Sultamuratov, J. Herring, C. El-Tallawi, W. Zoghbi, A. Mang, R. Azencott
2. *Maximum Matchings in Rectangle*, [preprint](#)
A. Dzhumadil'dayev, R. Sultamuratov