






Experience

	<b>University of Houston   Research Assistant</b> <ul style="list-style-type: none"><li>Built a disease classification model with 97.5% prediction accuracy with Random Forest algorithm using sklearn</li><li>Derived permutation-based feature importance based on OOB score using <code>rfrimp</code> package</li><li>Fine-tuned parameters of <code>ADMM</code> algorithm application for diffeomorphic matching of non-rigid surfaces</li><li>Developed a resolution downsizing algorithm of 3D images based on metrics-induced graph connectivity using Matlab</li></ul>	Houston, TX 2021 - present
	<b>Aikynetix LLC   Computer Vision Engineer</b> <ul style="list-style-type: none"><li>Built an api for face detection and face tracking application using <code>MMpose</code>, <code>FaceNet</code> models</li><li>Tested and integrated pose and object detection models such as hrnet, resnet, yolov, tcformer into application</li><li>Built and trained a custom pose classification NN model with 98% hold-out accuracy using PyTorch</li><li>Developed algorithms for estimation of human physical parameters from video streams using OpenMM, OpenCV</li><li>Built a phase detection algorithm of a human motion based on SSIM using Cupy</li></ul>	Houston, TX Summer 2022

Education

	<b>University of Houston</b> Ph.D. in Applied Mathematics	Houston, TX 2020 - 2024
	<b>Wayne State University</b> M.S. in Mathematics	Detroit, MI 2018 - 2020
	<b>Al-Farabi Kazakh National University</b> B.S. in Mathematics	Almaty, Kazakhstan 2005 - 2009

Skills & Knowledge

<ul style="list-style-type: none"><li>Programming: Python, Matlab, C++, R, SQL</li><li>Frameworks: PyTorch, TensorFlow/Keras, OpenMM, OpenCV, NumPy, pandas, sklearn, SciPy, git, SLURM, ssh/paramiko, bash/zsh, GCP, Docker, PAPI/TAU, OMP, multiprocessing</li><li>Relevant coursework: Optimization, Probability &amp; Statistics, Numerical Methods, Deep Learning, Data-Driven Algorithms, Statistical Data Analysis, High-Performance Computing, Linux/Cluster Computing</li><li>Certificates:  <a href="#">TensorFlow Developer Certificate</a>, <a href="#">Transfer Learning for Images Using PyTorch</a>, <a href="#">Linux</a>, etc</li></ul>
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Publications

<p>1. <a href="#">Automatic classification of deformable shapes</a> <i>H. Dabirian, R. Sultamuratov, J. Herring, C. El-Tallawi, W. Zoghbi, A. Mang, R. Azencott</i></p>
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Machine Learning Course Projects

<ul style="list-style-type: none"><li>Age Recognition   Data-Driven Algorithms, University of Houston I conducted age recognition problem as my final project during the Pattern Recognition course I completed at the University of Houston. I transformed 30k+ of face images from <a href="#">Kaggle</a> into 128 measurements using OpenFace. Then I implemented the PCA analysis and ML algorithms such as SVM, Random Forest to solve the age recognition problem. See <a href="#">here</a> for more.</li><li>Financial Hedging   Math-to-Industry Boot Camp, Securian Financial We worked in a team researching solutions for reducing the computational cost of the estimation of the Greek variables on the options market. My main contribution was to test performance of quadratic interpolation as a proxy model for the Black-Scholes model for Delta and Rho variables producing 3–5% relative error of approximation. See <a href="#">here</a> for more.</li><li>Match Prediction   Statistical Data Analysis, Wayne State University As part of the Statistical Data Analysis course at Wayne State University, I conducted a final project focused on match prediction problem. I have collected 5k+ tennis match data from internet websites using parsing Python packages. Then I implemented ML algorithms such as KNN, QDA, LDA, Ridge&amp;Lasso methods producing 89% prediction with KNN. See <a href="#">here</a> for more.</li></ul>
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