MIN JIANG

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PROFESSIONAL SUMMARY

I have 6-year research experience in solving real-world problems with machine learning /deep learning solutions. I successfully accomplished **4** projects and published **6** journal papers and **2** conference papers. I am specialized in **machine learning, computer vision, pattern recognition, image/signal processing**, and experience in **large-scale data analytics and modeling**. I am eager to join a fast-moving organization and provide innovative and implementable solutions.

SKILLS

• Programming Language: 4-year Python, 6-year Matlab, 2-year C & C++ & SQL.
• Libraries: Tensorflow, Caffe, Pytorch, OpenCV, Scikit-learn, Numpy, Panda, Matplotlib.
• Tools: Visual Studio, Tableau, CACD

EDUCATION

PhD: Electrical Engineering **West Virginia University** - Morgantown, WV Expected in 12/2019
M.S: Electrical Engineering **China University of Mining and Technology** - Beijing, China 06/2010
B.S: Electrical Engineering **China University of Mining and Technology** - Beijing, China 06/2007

WORK HISTORY

Electrical Engineer China Coal Technology & Engineering Group Corp - Beijing, China 07/2010 - 06/2013

• Power distribution system and Programmable Logic Controller (PLC) design for industrial buildings.

RESEARCH EXPERIENCES

Graduate Research Assistant West Virginia University - Morgantown, West Virginia 08/2013 - Current

Project: Body Mass Index (BMI) Estimation from Visual Appearance of Face and Body.

• Proposed a modeling-based BMI estimation approach for 3D reconstruction of body data.
• Developed and implemented a novel computational framework for analyzing body weight from 2D body images which outperforms recent state-of-the-art approaches.
• Systematically analyzed visual BMI estimation problem from feature level with interesting deep insights. This is the first work on this topic.
• Proposed a two-stage learning method (includes reinforce learning and optimization) for BMI estimation from face images which outperforms regression-based approaches.
• Proposed a label distribution based deep neural network for BMI estimation from large-scale BMI face images dataset with significantly improvement on facial BMI estimation.

Project: Autism Spectrum Disorder (ASD) Detection.

• Developed a method to analyze the differences of photos taken by people with ASD and without ASD from the visual features and deep features. This is the first work to address this topic with computer vision method.

Project: Face Recognition.

• Collaborated with a team to propose a body pose detection based approach for unconstraint face detection on large dataset that achieved one of the best performance in UCCS face detection challenge.
• Proposed a discriminative common feature subspace learning method for large-scale cross-age face recognition which outperforms most existing methods.

Project: Astronomical Signal/Image Denoising.

• Proposed a wavelet-based method for efficiently denoising de-dispersed radio signal of Rotating Radio Transients (RRATs) which contributed to significantly reducing the parameters' errors (16%-90%) of 8 RRATs.
• Proposed a curvelet-based denoising method for isolated astronomical pulses signal which leads to higher detection rate (98.7%) than existing denoising methods.

HONORS AND AWARDS

2017 Rank Top 3 of UCCS Face Detection Challenge
2008-2010 Outstanding Student Honor of China University of Mining and Technology
2004-2007 Outstanding Student Honor of China University of Mining and Technology

PUBLICATIONS

Journals

• **M. Jiang**, G. Guo, "Body Weight Analysis from Human Body Images," IEEE Transactions on Information Forensics and Security, vol. 14, no. 10, pp. 2676-2688, Oct. 2019.
• **M. Jiang**, Y. Shang, G. Guo, "On visual BMI analysis from Facial Images", Image and Vision Computing, vol. 89, pp. 183-196, 2019.
• **M. Jiang**, B.Y. Cui, Y. F. Yu, Z.C. Cao, "DM-free Curvelet based Denoising for Astronomical Single Pulses Detection", vol. 7, pp. 107389-107399, IEEE ACCESS, 2019.
• Y. F. Yu, G. X. Xu, **M. Jiang**, H. Zhu, D. Q. Dai, H. Yan, "Joint Transformation Learning via L2,1-Norm Metric for Robust Graph Matching", IEEE Transactions on Cybernetics, 2019.
• Y. F. Yu, C.X. Ren, **M. Jiang**, M.Y. Sun, D.Q. Dai, and G. Guo, "Sparse Approximation to Discriminant Projection Learning and Application to Image Classification", Pattern Recognition, p.106963, 2019.
• **M. Jiang**, B.Y. Cui, N.A. Schmid, M.A. McLaughlin and Z.C. Cao, "Wavelet Denoising of Radio Observations of Rotating Radio Transients (RRATs): Improved Timing Parameters for Eight RRATs," The Astrophysical Journal, 847, no. 1 (2017): 75.
• **M. Jiang**, G. Guo, G. Mu, "Visual BMI estimation from face images using label distribution based method", submitted to Computer Vision and Image Understanding.
• Y. F. Yu, Q. Wang, **M. Jiang***(corresponding author), "Discriminative Common Feature Subspace Learning for Age-invariant Face Recognition," submitted to IET Biometrics.
• **M. Jiang**, Y. Shang, G. Guo, "A Computational Approach to Body Mass Index from 3D Reconstruction of Dressed People", submitted to Journal of Visual Communication and Image Representation.

Conference

• G. Manuel, P. Y. Hu, C. Herrmann, C. H. Chan, **M. Jiang** et al. "Unconstrained face detection and open-set face recognition challenge." In 2017 IEEE International Joint Conference on Biometrics (IJCB), pp. 697-706, 2017
• Y. Zhang, **M. Jiang**, Y. Wu, X. Zhou, "An automatic rebar splitting system based on two-level of the chain transmission". IEEE International Conference on Cyber Technology in Automation, Control, and Intelligent Systems (CYBER), pp. 587-590, 2015.