MIN JIANG

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PROFESSIONAL SUMMARY

I have 5-year research experience in solving real-world problems with **machine/deep learning** and **computer vision** solutions. I successfully accomplished **4** projects and published **6** journal papers and **2** conference papers. I am specialized **in visual BMI estimation, face recognition, reinforcement learning, optimization image processing, large-scale data analytics and modeling**, and 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 & SQL.
• Libraries: Tensorflow, Caffe, Pytorch, OpenCV, Scikit-learn, Numpy, Panda, Matplotlib.
• Tools: Visual Studio, Tableau, Hadoop, 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

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 a computational framework for analyzing body weight from 2D body images which consists of **feature detection and computation**, and **training**. It outperforms recent state-of-the-art approaches.
• Systematically analyzed visual BMI **estimation problem** from feature level by **deploying several deep face models** and **geometric models**. This is the first work on this topic.
• Proposed a two-stage learning method (includes **reinforcement learning** and **estimator optimization**) for BMI estimation from face images which outperforms regression-based approaches.
• Proposed a **label assignment 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.

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.

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

Journal Articles

• **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, Q. Wang, **M. Jiang***(corresponding author), “Discriminative Common Feature Subspace Learning for Age-invariant Face Recognition,” IET Biometrics, 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.

Articles Under Review

• **M. Jiang**, G. Guo, G. Mu, “Visual BMI estimation from face images using label distribution based method”, under review with Computer Vision and Image Understanding.
• **M. Jiang**, Y. Shang, G. Guo, “A Computational Approach to Body Mass Index from 3D Reconstruction of Dressed People”, under review with Journal of Visual Communication and Image Representation.

Conference Paper

• 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.