YIJUN BIAN

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EDUCATION

University of Science and Technology of China, Hefei, Anhui, China *Sept 2014 to Nov 2020*
- Ph.D. in Computer Science and Technology *(Since Sept 2016)*
- Master student in Computer Science and Technology *(Sept 2014 to Aug 2016)*
- School of Computer Science and Technology Supervisor: Prof. Huanhuan Chen
- Dissertation: Research and Applications of Diversity in Ensemble Classification
- Overall GPA: 3.65 (Grade: 86.87) Ranking: 2/37 (10/114 as a master student)

Northwest A&F University (NWAFU), Yangling, Shaanxi, China *Sept 2010 to Jul 2014*
- B.S. in Computational Mathematics, College of Science
- Overall GPA: 3.44 (Grade: 87.68) Ranking: 5/47

RESEARCH INTERESTS

Ensemble Learning, Machine Learning, AutoML, Fairness in AI

PUBLICATIONS

[1] **Y Bian** and H Chen, "When Does Diversity Help Generalization in Classification Ensembles?" *IEEE Transactions on Cybernetics*, early access, Feb. 26, 2021, doi: 10.1109/TCYB.2021.3053165.

[2] **Y Bian**, Y Wang, Y Yao, and H Chen, "Ensemble Pruning Based on Objection Maximization With a General Distributed Framework," *IEEE Transactions on Neural Networks and Learning Systems*, vol. 31, no. 9, pp. 3766–3774, Sept 2020.

[3] **Y Bian**, Q Song, M Du, J Yao, H Chen, and X Hu, "Subarchitecture Ensemble Pruning in Neural Architecture Search," *IEEE Transactions on Neural Networks and Learning Systems*, early access, Jun. 18, 2021, doi: 10.1109/TNNLS.2021.3085299.

EXPERIENCES

Shanghai Institute of Microsystem and Information Technology, Shanghai, China
- *Algorithm Engineer*, Bionic Vision System Laboratory *Dec 2020 to Present*
  - Implemented the semi-global matching (SGM) algorithm in C++ to estimate a dense disparity map from a rectified stereo image pair
  - Learned the Dlib package and the software usage of Xilinx HLS
  - Applied for two grants with proposals to research ensemble learning, diversity, and fairness
  - Reviewed literature about neural architecture search (NAS)

TENCENT, Shenzhen, Guangdong, China
- *Research Intern*, Platform & Content Group (PCG) *Dec 2019 to Mar 2020*
  - Attempted to gather different blocks from existing video models and construct an ensemble automatically
  - Attempted to reform video models by assembling different levels of results from themselves
  - Attempted to gather weak models by predicting their performance provided weights

Texas A&M University, College Station, Texas, United States
- *Visiting Research Scholar*, Data Analytics at Texas A&M (DATA) Lab *Nov 2018 to Apr 2019*
  - Department of Computer Science & Engineering Adviser: Prof. Xia (Ben) Hu
  - Collaborative research on utilizing ensemble learning in neural architecture search, published in the IEEE Transactions on Neural Networks and Learning Systems

University of Science and Technology of China, Hefei, Anhui, China
- *Graduate Research Assistant*, Dept. of Computer Science & Technology *Sept 2014 to Nov 2020*

  - The USTC-Birmingham Joint Research Institute in Intelligent Computation and Its Applications (UBRI) — Supervisor: Prof. Huanhuan Chen
- *Teaching Assistant*, School of Mathematical Sciences — *Mar to Jul 2016*
  - Course: Mathematical Analysis (Undergraduate)

TECHNICAL SKILLS

Programming Languages: Python, MATLAB, C/C++
Deep Learning Tools: Keras, TensorFlow, PyTorch

PROJECTS

[1] **EPFD** *https://github.com/eustomaqua/EPFD* — *Apr 2020*
Official released code for the published paper "Ensemble pruning based on objection maximization with a general distributed framework"

[2] **PyEnsemble** *https://github.com/eustomaqua/PyEnsemble* — *Jul 2019 to Apr 2020*
Open-source library for ensemble learning methods, involving existing diversity measures and ensemble pruning methods

PROFESSIONAL SERVICES

Journal Reviewer

- *IEEE Transactions on Neural Networks and Learning Systems*
- *Neural Networks*

Open Source Contributor

- Arctic Code Vault Contributor in the 2020 GitHub Archive Program
- *AdaNet*, enabled the function to use the GPU memory dynamically — *Oct 2019*
- *OpenNE*, fixed typos for the default value of the "seed" parameter — *Aug 2019*
- *AutoKeras*, implemented "XceptionBlock" and "Tunable XceptionBlock" in the blocks branch — *Jun 2019*

Volunteer

- *GDG Shanghai*, wrote WeChat articles as technical sharing summaries — *Mar 2021 to Present*

MAJOR HONORS & AWARDS

Awarded at the University of Science and Technology of China (USTC)

- GDC Technology Scholarship — *Oct 2019*
- International Exchange Funding for Excellent Students — *Apr 2018*
- Second Prize Academic Scholarship — *Sept 2018 to Sept 2016, Sept 2014*
- First Prize Academic Scholarship — *Sept 2015*

Awarded at the Northwest A&F University (NWAFU)

- Advertised as one of undergraduates on *https://news.nwafu.edu.cn/xnxw/43820.htm* — *Jun 2014*
- Outstanding Undergraduate Graduation Thesis (Design) — *Jun 2014*
- President Scholarship — *Dec 2013*
- Excellence Award of the Undergraduate Innovation Forum and Finding Presentation — *Jan 2013*
- Merit Student, for three consecutive years — *Dec 2013 to Dec 2011*
- First Prize Professional Scholarship, four times in a row — *Oct 2013 to Mar 2011*
- Best Debater in the Freshman Cup Debate — *Nov 2010*