RUN WANG

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EDUCATION

Fudan University, Shanghai *September 2018 - Present*
Bachelor of electrical engineering (Honours) and biomedical engineering
GPA: 3.81/4.00 (Overall) **Ranking:** 2/204(department), rank 1^{st} in major
Course Highlights: Mathematical Analysis(A), Pattern Recognition and Machine Learning(A), Probability, Mathematical Statistics and Stochastic Process(A), Data Structure and Algorithm Design(A), Signal and System(A), Information Theory, Principle of Automatic Control(A)

DUKE-NUS Medical School, Singapore *June 2019 - July 2019*
Visiting Student of Prehealth Experimental Program

Computational Neuroscience Summer School, Neuromatch *July 2020 - August 2020*

PUBLICATION

Run Wang, Xiaotian Zhou, Zhongzhi Zhang and Guarong Chen. Maximizing the Smallest Eigenvalue of Grounded Laplacian Matrix by Node Selection, *IEEE Transactions on Cybernetics, Under Review*

Run Wang, Ke Xu, Hui Feng and Wei Chen. Hybrid RNN-ANN Based Deep Physiological Network for Pain Recognition, *IEEE EMBC 2020*

RESEARCH EXPERIENCE

Pain Detection System for Nonverbal Patients
Supervisor: Prof.Gari Clifford ,Georgia Tech *May.2021 - Present*

- Proposed this interpreatble pain research project
- Research on Interpreable pain monitoring model

Maximizing the Smallest Eigenvalue of Grounded Laplacian Matrix by Node Selection
Supervisor: Prof. Zhongzhi Zhang, Fudan University *Sep. 2020 - May.2021*

- Propose a nearly linear time approximation algorithm with fairly good performance on widespread networks
- Rigorous proofs for its NP-hard complexity and non-submodularity are included.
- Conduct numerous experiments on different networks to demonstrate the superiority in terms of efficiency and effectiveness compared to other methods

Pain Detection System for Nonverbal Patients
Supervisor: Prof. Wei Chen, Fudan *Jun. 2019 - Feb.2020*

- Proposed this pain research project from a real clinical problem in the hospice care center
- Used hybrid RNN-ANN method to classify the pain levels and cooperated with the Biovid Heat database and EmoPain database
- Achieved a state of art result of this problem in terms of accuracy and clinical convenience and published an EMBC 2020 paper

MIT AI-Cures Open Task: Covid-19 Drug Discovery with ML Tools
Supervisor: Prof. Xipeng Qiu *Apr. 2020 - Jul. 2020*

- Worked on the open task of screening exiting drug molecule to find the drug for COVID-19
- Proposed a GNN which leveraged the feature engineering results
- Achieve 88% auc-roc score which was the state of the art

HONORS AND AWARDS

Junzheng Undergrad Research Granting granting from Nobel Laureate *Apr.2021*

Tengfei Undergrad Outstanding Research Reward, Fudan *Mar.2021*

KLA Scholarship, Fudan four academical-outstanding undergraduate per year *Nov.2020*

Fudan Qingyun Outstanding Undergrad Granting *Dec.2019*

GaoShan Scholarship, Fudan top 5% *Nov.2019*

EXTRACURRICULAR

Hospice Care Centre Volunteer Leader *Sep. 2018 - Sep. 2019*
Volunteer Leader of Hospicecare Service *Shanghai Jin'an Hospital*

SKILLS

Programming Languages C, C++, Python, Julia, Matlab, verilog
English Test TOEFL IBT 102 GRE 323+3.5