

RUN WANG

<https://github.com/SamanthaWangdl>

<https://runwang.xyz/> ♦ samanthawangdl@gmail.com

EDUCATION

Fudan University, Shanghai

September 2018 - Present

Bachelor of electrical engineering (Honours) and biomedical engineering

GPA: 3.81/4.00 (Overall) 4.00/4.00 (Second Year) **Ranking:** 2/204

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

Maximizing the Smallest Eigenvalue of Grounded Laplacian Matrix by Node Selection

Supervisor: Prof. Zhongzhi Zhang, Fudan University

Sep. 2020 - Present

- 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

Interpretable Pain Detection System for Nonverbal Patients

Supervisor: Prof. Gari Clifford and Prof. Wei Chen, Fudan, Georgia Tech

Feb. 2019 - Present

- Proposed this pain research project from a real clinical problem in the hospice care center
- Used hybrid interpretable 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 existing 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

EXTRACURRICULAR

Hospice Care Centre Volunteer
Volunteer Leader of Hospicecare Service

Sep. 2018 - Sep. 2019
Shanghai Jin'an Hospital

SKILLS

Programming Languages
English Test

C, C++, Python, Julia, Matlab
TOEFL IBT 102 GRE 323

EXPLANATION

The Academic Year

Each academic year of Fudan University has a fall semester, a spring semester and intensive summer sessions. Each semester includes 18 teaching weeks. For pre-orientation, i.e., courses focusing on principles, concepts and ideas, students earn one credit for one hour of instruction in class per week throughout the semester. The ratio of weekly contact hours to credit hours varies for practice, laboratory, learning comprehension and physical education courses, which is usually set by the respective teaching divisions for these courses.

Method of Assessment and Calculation of Scores

1. Examination results are recorded according to the floating-point system. Below is the Conversion table for the letter grades and their numerical equivalents.

| Grade | A | A- | B+ | B | B- | C+ | C | C- | D | D- | F | F | NP |
|------------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|----|----|----|
| Grade Point Conversion | 4.0 | 3.7 | 3.3 | 3.0 | 2.7 | 2.3 | 2.0 | 1.7 | 1.3 | 1.0 | 0 | 0 | 0 |
| Percentage | 90 | 85 | 80 | 75 | 70 | 65 | 60 | 55 | 50 | 45 | 40 | 35 | 30 |
| Percent | 100 | 90 | 80 | 70 | 60 | 50 | 40 | 30 | 20 | 10 | 0 | 0 | 0 |

The method for calculating the grade point of credits is:

The credit score for a course = the score × the credit coefficient.

The GPA for a semester/academic year = $\frac{\sum \text{score obtained on all courses taken}}{\sum \text{the credit coefficients of these courses}}$

- The symbol “*” refers to results obtained outside the University that count towards credits but do not count towards the GPA.
- For courses whose final assessment is P/Pass or NP/Not Pass, the course score P counts towards credits, and both P and NP do not count towards the GPA.
- History courses, marked with an “HI” symbol, are usually more challenging, cover topics more in-depth and involve more preparation.
- Courses marked with a “Gr” symbol are offered primarily for the graduate students. Undergraduates taking such courses in advance will not obtain credits for their undergraduate education, and accordingly, the results obtained therefrom shall not count towards the GPA for their undergraduate education.
- The transcript records the students' scores for all the courses taken during their time at the University. According to the “Rules and Regulations of Fudan University Concerning the Award of a Bachelor's Degree”, when awarding a degree to a graduating student, the GPA is calculated in conformity with the valid results obtained on all the courses stipulated in the teaching program of the student's major at the time of graduation, and, if the student reaches the required GPA standard for the degree, and satisfies other relevant conditions, a Bachelor's degree will be awarded.

Transcript of Academic Record

学生成绩单



Name: Wang Run
王润

Student ID: 18300720003

Gender: Female

Student Type: Degree Student

Date of Birth: 7- Jun -1999

ID NO: 210211199906076766

Nationality: CHN

Length of program: 4years

Total Credits: 127

GPA: 3.81

Date of Admission: 1- Sept -2018

Educational Experience: Enrolled

Degree: Enrolled

Major: Biomedical Engineering

| COURSE TITLE | CREDITS | GRADE | COURSE TITLE | CREDITS | GRADE | COURSE TITLE | CREDITS | GRADE | COURSE TITLE | CREDITS | GRADE |
|--|---------|-------|--|---------|-------|---|---------|-------|---|---------|-------|
| ACADEMIC SESSION 2017-2018 SEMESTER I | | | ACADEMIC SESSION 2018-2019 SEMESTER I | | | ACADEMIC SESSION 2019-2020 SEMESTER I | | | ACADEMIC SESSION 2020-2021 SEMESTER I | | |
| Advanced Audiovisual and Spoken English | 2 | *A- | Linear Algebra | 3 | A- | Engineering Mathematics | 4 | A | Internship | 1 | P |
| College English I | 2 | *A- | Programming | 4 | A | Probability, Mathematical Statistics and Stochastic Process | 4 | A | Basics of Biomedical Engineering | 3 | B+ |
| Military Theory | 1 | *P | English for Science and Technology | 2 | A | Analog Circuit | 5 | A | Information Theory | 4 | A- |
| Sports I | 1 | *A | Mathematical Analysis BI | 5 | A | Fundamentals of Digital Logic | 4 | A | Engineering Drawing and Metalworking Practice | 2 | B+ |
| Outline of Modern Chinese History | 2 | *P | College Physics B I | 4 | B+ | Nordic Enterprise Innovation Practice | 2 | P | Digital Signal Processing | 4 | A |
| Cultivation of Morality and Foundations of the Law | 2 | *B+ | Situation and Policy I | 0.5 | P | Sports III | 1 | A | Automatic Control Theory | 4 | A |
| The Essence of Core Socialist Values | 2 | *B | ACADEMIC SESSION 2018-2019 SEMESTER II | | | Situation and Policy III | 0.5 | P | End Of Transcript | | |
| An Introduction to MaoZedong Thought and the Theoretical System of Socialism with 3 Chinese CharacterA | | *A- | | | | ACADEMIC SESSION 2019-2020 SEMESTER II | | | | | |
| An Introduction to MaoZedong Thought and the Theoretical System of Socialism with 2 Chinese CharacterB | | *P | World Musical Cultures | 2 | A | | | | | | |
| ACADEMIC SESSION 2017-2018 SEMESTER II | | | Basics of Analog Electronics | 4 | B+ | Pattern Recognition & Machine Learning | 3 | A | | | |
| Contemporary Western Economic Schools | 2 | *A- | Introduction to Modern Medical Science | 2 | C | Data Structure and Algorithm Design | 4 | A | | | |
| Audiovisual English | 2 | *A | Introduction to Electronic Systems | 2 | B+ | Signal and System | 4 | A | | | |
| Selected Readings from British and American Press | 2 | *A | Mathematical Analysis BII | 5 | A | High Frequency and Radio Frequency Electronics | 4 | A | | | |
| Finance and Law in Modern Society | 2 | *P | College Physics B II | 4 | A | Situation and Policy IV | 0.5 | P | | | |
| Basics of Management | 2 | *P | Fundamental Physics Experiments | 2 | A- | End Of Transcript | | | | | |
| Understanding Financial Statements | 2 | *P | Situation and Policy II | 0.5 | P | | | | | | |
| Sports IV | 1 | *A- | End Of Transcript | | | | | | | | |
| Microeconomics | 3 | *B | | | | | | | | | |
| End Of Transcript | | | | | | | | | | | |

