Yuan Gao

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EDUCATION

UNIVERSITY OF CALIFORNIA, SAN DIEGO 2018.9-PRESENT
— BACHELOR OF SCIENCE IN COMPUTER SCIENCE
— MAJOR GPA:4.0/4.0

SKILLS

TECH-SKILLS
- **PROGRAMMING LANGUAGES:** PYTHON, C/C++, JAVA, SHELL, MATLAB, R, JAVASCRIPT
- **MACHINE LEARNING:** LINEAR/POLYNOMIAL/MULTIVARIABLE REGRESSION, LOGISTIC REGRESSION, K-MEANS, KNN, SVM, SOFTMAX CLASSIFIER, NEURAL NETWORK
- **NEURAL NETWORKS:** DEEP NEURAL NETWORK, CNN, YOLO, RESNET, LSTM, RNN, VGG-19, SIAMESE, ETC
- **DATABASE LANGUAGES:** MYSQL
- **MODULES:** SCIKIT-LEARN, NUMPY, PANDAS, MATPLOTLIB, KERAS, BEAUTIFULSOUP, TENSORFLOW
- **OPERATING SYSTEMS:** UNIX/LINUX
- **WEB TECHNOLOGY:** SPRING, SPRINGMVC, NODEJS, REACTJS, SERVLET

SOFT-SKILLS
- GOOD AT **QUICK LEARNING, KEEPING HUNGRY FOR NEW TECHNOLOGIES, WRITING AND COMMUNICATING**
- COMFORTABLE WITH **WORKING IN A TEAM** AND **SPEAKING IN FRONT OF CROWD**

PROJECTS[1]

MACHINE LEARNING AND DEEP LEARNING MODELS FROM SCRATCH 2019.6-PRESENT
Projects for deeplearning.ai
- Implemented a whole model (including **initialization, regularization, BP, and different optimizers**) for Deep Neural Network
- Optimizers that built from scratch include **mini-batch GD, SGD, RMSprop, Adam**
- Implemented building blocks for **Convolutional Neural Network** including padding, pooling layers, convolution layers, FC layers, BP for pooling layers and BP for Conv layers using **Numpy only**, and **Resnet** with skipping step of 3 using **Keras**
- Build a **Neural Style Transfer from scratch** using **VGG-19** Network and **Transfer learning** in Keras

DATA WRANGLING&CLEANING ON MASSIVE REAL WORLD DATA 2019.3
UC San Diego Data&GIS Lab's Data Wrangling Competition
- Cleaned a real-world messy weather dataset with over **10 million rows** of data and with **20% missing/unformatted data**
- Analyzed the missingness(**MCAR, MAR, NMAR, MD**) by running **Permutation test**
- Imputing missing value using **Scikit-learn**, Pandas with **Multivariate Regression** and **KNN**
- Minimized code complexity by choosing different data structures and using pandas features, including vectorization
- **Won this competition as the only winner**

STATISTICALLY TESTING THE EXISTENCE OF SOCIAL MEDIA BOTS 2019.1
UC San Diego COGS9: Introduction to data science.
- Analyzed the posts of a celebrity suspected to use bots on internet to add popularity
- **Web-scrapped more than 5000** posts from Weibo, the biggest social media with **a strong anti-scraping technology**
- Employed **A/B test** to check whether the test statistic is statistically significant
- Utilized **NLP packages** in Python(NLTK and Jieba) to find evidence for the existence of social media bots

EXPERIENCE

UNDERGRADUATE RESEARCHER 2019.10-PRESENT
UCSD Laboratory of Computational Cellular Mechanobiology
- Building Python package(STUBS) for automating PDE solvers using finite element method (Numerical Analysis)
- Implementing numerical model emulators based on Fenics framework
- **Working on the publication the paper**

SOFTWARE ENGINEER INTERN 2019.6-2019.9
China Telecom Cooperation Limited
- Debugging and testing features of a **city-level** medicine purchasing system written in Spring + SpringMVC + Mybatis
- Implementing features of a role based drug purchasing system including **adding/querying/deleting** specific medicine information for medicine producers and **adding/deleting/editing** carts for hospitals
- Getting familiarity of **SVN** and **Gradle**

CERTIFICATES

HIGH PERFORMANCE COMPUTING CERTIFICATE
San Diego Supercomputer Center
- Attended a 10 week training session on introductory parallel computing and GPU computing provided by SDSC

MACHINE LEARNING CERTIFICATE
Coursera.org
- Finished the Machine learning course taught by Andrew Ng

HONORS

WINNER OF UCSD DATA WRANGLING CONTEST 2019.3
UC San Diego Data&GIS Lab

UCSD PROVOST HONOR
UC San Diego Eleanor Roosevelt college

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[1] **All of the source code are** on my Github *www.github.com/Rabona17*