Siyuan Gao

rickygao213@gmail.com

Education

Bachelor in Mathematics and Applied Mathematics

Aug. 2012 – Jun. 2016

Zhejiang University

Overall GPA: 3.84/4.00, third year rank 1/78

Professional Research Development Program

Jul. 2015 – Sep. 2015

University of California, Davis

Grade: A+

Exchange Program

Jul. 2014 – Aug. 2014

University of California, Berkeley

Overall GPA: 3.88/4.00

Research Experiences

New York University Shanghai (Shanghai, China), Since Jan. 2016

Research Intern, Department of Computer Science (mentored by Prof. Nan Cao)

- Derived an active learning algorithm for rare categories detection

Zhejiang University (Hangzhou, China), Since Sep. 2015

Research Intern, Institute of Artificial Intelligence (mentored by Prof. Hui Qian)

- Conducted research on Optimization Algorithms on Riemannian Manifold for Robust Principal Component Analysis problem
- Implemented the algorithm for video content analysis

University of California, Davis (Davis, CA), Jul. 2015 – Sep. 2015

Research Intern, Department of Biomedical Engineering (mentored by Prof. Jinyi Qi)

- Developed Joint-maximum likelihood activity and attenuation estimation algorithm (an algorithm to reconstruct PET biomedical image)
- Removed cross-talk defect in the state-of-art algorithm and accelerated convergence

Zhejiang University (Hangzhou, China), Apr. 2015 – May. 2015

Research Intern, School of Mathematical Sciences (mentored by Prof. Zhenyue Zhang)

- Engaged in research on Electroencephalography(EEG) Classification
- Utilized Adaptive Autoregressive Model, extracted the feature information for EEG with Kalman filter parameter determination, classified the features with Neural Network, Linear Discriminant Analysis, and Quadratic Discriminant Analysis
- Lowered the classification error rate to 12.1%

Zhejiang University (Hangzhou, China), Mar. 2015 – Jul. 2015
Software Intern, Department of Computer Science (mentored by Prof. Kun Zhou)
- Developed an image blending software, using Partial differential equation-based algorithm and Mean-value coordinate System, via OpenCV as framework programming language and OpenMP for parallel computing

State Key Lab of CAD&CG (Hangzhou, China), Oct. 2014 – Nov. 2015
Research Intern, Visual Analytics Group (mentored by Prof. Wei Chen)
- Implemented a Java system that deciphers, stores, transforms, and visualizes call records from millions of cell phone users in a city
- Designed a spatial data structure MobiHash for quick data queries
- Generated and visualized vector fields for dynamic population flows

University of California, Berkeley (Berkeley, CA), Jul. 2014 – Sep. 2014
Course Project, Department of Industrial Engineering and Operation Research
- Implemented a web scraper for fundraising website *Indiegogo* and performed statistical data analysis for most efficient media presentation method for fundraising

Publications

A Visual Query Model for Multi-source Urban Mobility Data
With Fei Wang, Fan Zhang, Feiran Wu, Tianyu Gu, Ye Zhao, Hujun Bao
Journal of Computer-Aided Design & Computer Graphics, 2016, 28 (1)

Honors & Awards

Excellent Student Awards 2012-2013
Outstanding Student Leader Awards 2012-2013
First-Class Scholarship for Outstanding Students 2014-2015
National Scholarship 2014-2015
Awarded to Top 1.5% students in junior year in Zhejiang University.
Honorable Mentions in Mathematical Contest in Modeling 2015

Strength & Skills

Solid foundation in Mathematics and Statistics
Familiar with C++, MATLAB, R, Python
Experience in interdisciplinary research

Standard Tests

Top 1% in Chinese National College Entrance Exam, 2012
TOEFL Total 111 (R: 29, L: 30, S: 24, W: 28), Apr. 2015
GRE Total 326 (V: 157/ 74%, Q: 169/ 97%, AW: 3.5/ 38%), Mar. 2015

Hobbies & Interests

Sports:
Runner-up of 2015 basketball league in Math Dept. as the captain
Served for Math Dept. teams of soccer, excellent midfielder
Photography:
Amateur