Junyuan Hong | Curriculum Vitae

University of Science and Technology of China
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Education

Michigan State University **East Lansing, USA**
Ph.D., Computer Science and Engineering *2018.9–*
Advisor: Prof. Jiayu Zhou

University of Science and Technology of China **Hefei, P.R.China**
M.S., Computer Science *2015.9–2018.6*
Advisor: Prof. Huanhuan Chen
Outstanding Freshman Scholarship (Grade 1)

University of Science and Technology of China **Hefei, P.R.China**
B.S., Physics, Computer Science minor *2011.9–2015.6*
GPA: General 3.1/4.3
Selected courses: Probability and Statistics B (91), Computation Method B (93), Equations of Mathematical Physics A (91), Computer Programing A (98).
Outstanding Undergraduate Scholarship (Grade 3)
Outstanding Freshman Scholarship (Grade 2)

Research Experience

Disturbance Grassmann Kernels **2017–2018**
Machine Learning *USTC-Birmingham Joint Research Inst. (UBRI)*
We extend the data augmentation method to kernel-based classifiers through dual optimization and apply the method to classifying subspace data, e.g. action videos.
- The paper has been accepted to ACM SIGKDD'18 (London, UK).

Data Augmentation for Action Recognition **2015–2017**
Machine Learning *UBRI*
By representing action videos as subspaces, we develop a novel method to improve the accuracy of recognition by augmenting representation data.
- The paper was ever submitted to AAAI-18, getting 1 acceptation, 1 weak rejection and 1 rejection.
- The paper has been submitted to DASFAA-18, titled: Variant Grassmann Manifolds: a Representation Augmentation Method for Action Recognition.

Model-based Kernel Method for Time Series Classification **2015–2016**
Machine Learning *UBRI*
We utilize a special type of Recurrent Neural Network, in which neural signals simulate natural spiking, to represent time series in model space for classification. As second author, I contribute a lot to codes and advise to apply the model to **event-based time series**.
- A conference paper on ECML (CCF B) as the second author.

Searching for A Lost Plane **2015**
Mathematical Modeling *The Mathematical Contest in Modeling, USA*
Our team, consisting of three undergraduate students, try to model and predict the trace of lost plane according to the positions of found wreckage. Though exhausted, I really enjoy the process of solving a hard problem.
- Designated as Successful Participant.

Project Experience

Cinema Manager System **2015.8**

Software Designer and Engineer *Works Applications (WAP), Shanghai*

(5-day internship) This project aims to design software for cinema managers, which should be efficient for their daily work. The whole internship is of English-based communication.

- Software design and documentation composing;
- Implement software using Java in one day and demonstrate it to WAP engineer;
- Get job offer from Works Applications.

Underworld Detection Project **2014–2015**

Engineer and Manager *USTC-Birmingham Joint Research Institute (UBRI)*

This project aims to detect underground infrastructure by combining physics and computer technologies. Both **hardware** and **software** works are included.

- As the manager, I distribute and schedule works to teammates, achieving a stable and efficacious cooperation;
- As the engineer, I designed the 1st generation of the cable detectors with my teammates:
  - The outdoor underground cable detector;
  - The indoor cable portable detector.

Personal Open-source Projects **2013–2015**

Software Engineer *USTC*

Some toy projects resulting from my personal interests, which happens in my undergraduate period. All below projects, except NaiNaiBang, can be found in my GitHub (jyhong836) as open source.

- Vivi: A XMPP protocol based client on Mac OS, which is developed using Swift and Objective-C.
- NaiNaiBang: A C2C iOS app for those who need individual on-site service, e.g. massage, hair cut.
- Defense: A tower defense game based on Unity3D engine. It is a 2-person team work.
- LinuxSound: I try to play a song by writing data into the sound card directly.
- draw3d: A realization of 3D algorithms using Java basic graphic APIs.

Publications

Yang Li, **Junyuan Hong**, and Huanhuan Chen. Sequential data classification in the space of liquid state machines. In *Joint European Conference on Machine Learning and Knowledge Discovery in Databases*, pages 313–328. Springer, 2016.

Junyuan Hong, Huanhuan Chen, and Feng Lin. Disturbance Grassmann kernels for subspace-based learning. *arXiv preprint arXiv:1802.03517, accepted to ACM SIGKDD'18*, 2018.

Technical Skills

Programing languages: Matlab $>$ Java $=$ Swift $>$ C++/C Programming, LaTeX
Hardware/Platform: Raspberry Pi, Mac, iOS

Standard Tests

GRE: 312/340+3.0/6.0
TOEFL: R27+L25+S15+W28=95

External Links

GitHub: @jyhong836
Homepage: http://www.jyhong.com