Juyong Jiang

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Highlight

My research interests are Computer Vision, NLP and GNN, with a focus on **Object Detection**, **Instance Segmentation**, **Attention Mechanism**, **GCN** and **Deep Learning**.

- **Excellent Bachelor Thesis Award** in Hohai University and recommended as **the Outstanding Bachelor Thesis in Jiangsu Province** in July. 2020.
- From Oct. 2019 till present, I am a **Research Intern** in **IVA**, **NLPR**, **CASIA**, working on instance segmentation in images & videos, supervised by Prof. **Jing Liu**.
- A paper "**Cascaded Semantic and Positional Self-Attention Network for Document Classification**" is submitted to EMNLP 2020, which is top-tier conference.
- So far, I have ***read more than 100*** **CVPR/ ICCV/ ECCV/ NIPS/ AAAI / ACL / EMNLP / NAACL papers** so that I can understand and re-implement the new papers.
- More details about me are in **My Homepage**.

Education

- **Hohai University** **Nanjing, China**
  B.S in Computer Science and Technology *08/2016--07/2020*
  GPA 88.76/100, 4.67/5.0, ranking top 8/107 in major

Publications

- **Juyong Jiang**, Jie Zhang and Kai Zhang. "Cascaded Semantic and Positional Self-Attention Network for Document Classification." In Proceedings of the Conference on Empirical Methods in Natural Language Processing (***EMNLP***), 2020. (Submit)
- Junfeng Chen, **Juyong Jiang**, et al. "A fault diagnosis system for rail transit platform doors based on deep learning." Chinese Patent. 201910613949.1.
- Jianjun Ni, **Juyong Jiang**, et al. "Bank card number positioning and recognition end-to-end method based on CNN and RNN." Chinese Patent. 201910933476.3.
- Junfeng Chen, **Juyong Jiang**, et al. "Multi-regional precipitation prediction model construction method based on multi-graph convolution and memory network." Chinese Patent. 201911362437.9.

Projects

- **Video & Image Instance Segmentation Based on Deep Learning**. (***03/2020--Present***)
  - Predict both the location and the semantic mask of each instance in an image & video.
  - Add the module of ASPP, CoordConv, DCN, Global Pooling, Self-Attention, etc. on baseline framework to solve some problems and improve performance.
  - ✓ ***IVA, NLPR, CASIA & HuaWei.***
- **Spatiotemporal Attention Probes Mechanism** (***09/2019--02/2020***)

- Establish Spatiotemporal Graph.
- Use Query as a seed and then use the Markov Random Walk, Random Walk with Restart, Page Rank, etc. on Spatiotemporal Graph to form the interaction of neighborhood.
- Combine the node information in the neighborhood to generate polarity features.

✓ ***Temple University & Fudan University***.

- **Spatiotemporal Data Mining in Smart Cities Based on Deep Learning**. (***07/2019--08/2019***)
  - Encode the non-Euclidean pair-wise correlations among regions into multiple graphs and then explicitly model these correlations using multi-graph convolution network.
  - Augments recurrent neural network with a contextual-aware gating mechanism to re-weights different historical observations.

  ✓ ***College of Computer Science and Technology, Zhejiang University***.
- **Bank Card Recognition System Based on Deep Learning**. (***03/2019--07/2019***)
  - Data augmentation by using random cropping, rotation, various transformation, blur and noise.
  - Using CTPN & CRNN model to locate and recognize bank card number, respectively.
  - Developing a web page and an android app to display and use.

  ✓ ***College of Internet of Things Engineering, Hohai University***.

Experience

- **Image & Video Analysis Group (IVA), National Laboratory of Pattern Recognition (NLPR), Institute of Automation, Chinese Academic of Sciences (CASIA)** — **Beijing, China**
  Research Intern — *10/2019--Present*
  - Worked on **instance segmentation** in images & videos, supervised by Prof. **Jing Liu**.
- **Department of Computer and Information Sciences, Temple University** — **Philadelphia, US**
  Research Intern — *08/2019--02/2020*
  - Worked on **natural language processing**, supervised by Prof. **Kai Zhang**.
- **Pervasive Computing Lab (PCLab), College of Computer Science and Technology, Zhejiang University** — **Hangzhou, China**
  Research Intern — *07/2019--08/2019*
  - Worked on **spatiotemporal data mining** in smart cities based on deep learning, supervised by Prof. **Ling Chen**.
- **AI Development Group, College of Internet of Things Enginee-ring, Hohai University** — **Nanjing, China**
  Research Assistant — *08/2018--07/2020*
  - Worked on **application development** based on deep learning, supervised by Prof. **Jianjun Ni**.

Awards and Honors

- Bachelor Thesis is recommended as **Outstanding Bachelor Thesis in Jiangsu Province** (**only 2 papers** in Department of Information, Hohai University), 2020
- **Excellent Bachelor Thesis Award** in Hohai University (**5%**), 2020.
- **Outstanding Student Honor** in Hohai University, 2020.
- Outstanding Student Honor in Hohai University, 2019.
- Excellent Grades in Trash Classification Challenge Cup of Huawei Cloud Artificial Intelligence Contest, 2019.
- Top 10 Outstanding students, College of Internet of Things Engineering, Hohai University, 2018.
- Advanced Individual of Students at Social Practices in Summer Vacation. (Serve as Electronic Referee in The 19th Annual Games in Jiangsu Province), 2018.
- Research and Innovation Excellent Scholarship in Hohai University, 2020.
- Spirtiual Excellent Scholarship in Hohai University, 2020.
- Academic Excellent Scholarship in Hohai University, 2020.
- Spirtiual Excellent Scholarship in Hohai University, 2019.
- Academic Excellent Scholarship in Hohai University, 2019.
- **National Encouragement Scholarship**, 2018.
- Academic Excellent Scholarship in Hohai University, 2018.
- Academic Excellent Scholarship in Hohai University, 2017.

Mathematical Ability

- 2nd Prize for Certificate Authority Cup Mathematical Modeling Online Challenge (Second Stage), 2020.
- 2nd Prize for Certificate Authority Cup Mathematical Modeling Online Challenge (First Stage), 2020.
- Honorable Mention for Mathematical Contest in Modeling (MCM), 2018.
- Honorable Mention for Certificate Authority Cup International Mathematical Contest in Modeling (CAMCM), 2017.
- Excellent academic grades in all mathematic curriculum. (Advanced Mathematics-*A*, Linear Algebra-*A*, Probability and Statistics-*A*, Mathematical Modeling-*A*, Numerical Analysis and Computing-*A*, Discrete Mathematics-*A*, Data Structure and Algorithms-*A*)

Programming Skills

Language	C / C++, Matlab, Java, Python
Web	HTML / CSS, JavaScript, JSP, PHP
OS	Linux
Framework	Tensorflow, Pytorch