

Shuai Yuan 袁帅

Email: shuai@cs.duke.edu

Tel: (919) 949-3462

URL: <http://www.cs.duke.edu/~shuai>

Education:

Ph.D. in Computer Science, Duke University, USA

2018.8-present

- Research focused on **computer vision** and **deep learning**, supervised by [Prof. Carlo Tomasi](#)
- Currently working on pixel-level video motion tracking: optical flow, occlusion, and motion boundary prediction
- Interested in the joint learning of multiple vision tasks using one multi-task deep neural network
- Current GPA: **4.00/4.00**; minor (concurrent master's) in Statistics

B. S. in Computer Science, K. Y. Honors School, Nanjing University, China

2014.9-2018.6

- [Kuang Yaming Honors School](#) is one of the National Training Bases for Talented Students ("Elite Program") certified by China's Ministry of Education, which only admits the top 5% of newly admitted freshmen
- Overall GPA: **4.59/5.00**, ranking **1/41** in the Computer Science Elite Program

Research Experience:

Nanjing University [LAMDA \(Learning And Mining from Data\) group](#)

2017.3-2018.5

- Supervisor: [Prof. Zhi-Hua Zhou](#) (Fellow of the ACM/AAAS/AAAI/IEEE)
- Contributed open source code for the models gcForest (deep forest) and eForest (forest auto-encoder)
- Worked on improving deep forest by adding in decision path information as final-year thesis defense

Stanford University online research project

2017.9-2018.3

- Supervisor: [Prof. Tsachy Weissman](#) (IEEE Fellow)
- Won **first place** in the research project competition "Optimal Estimation of the Differential Entropy"
- Worked on generating tighter exponential concentration bounds of the KL-Divergence for empirical estimation

Duke University undergraduate research program

2016.8-2016.12

- Supervisor: [Prof. Carlo Tomasi](#) (ACM Fellow)
- Enrolled in a one-on-one Research Independent Study program as an exchange student with final grade A+
- Developed image path metrics based on Earth Mover's Distance and tried to apply in Manifold Learning

Work Experience:

Teaching assistant, Duke University, USA

2019.1-2019.5, 2019.9-2019.12

- Teaching assistant for CS 527 - Computer Vision (grad-level), Spring 2019
- Teaching assistant for CS 371D - Elements of Machine Learning (undergrad-level), Fall 2019
- Held office hours and Q&A sessions; graded exams and assignments

Biological data analyst intern, Toplore Bio-Tech, Nanjing, China

2018.7-2018.8

- Biological data analysis concerning medical image processing and genetic statistics
- Applied machine learning algorithms to detect cancer cells and chromosome abnormality

Quant intern, Tianfeng Securities, Shanghai, China

2016.7-2016.8

- Implemented statistical methods on financial decision-making models by computer simulations
- Specifically, predicted potential profits of strategies based on Investor Sentiment Index Models

Technical Skills:

- Proficient in **C/C++**, **Python**, **MATLAB**, and **R** programming
- Proficient in building deep learning models by **PyTorch** and **Tensorflow**
- Proficient in experimenting on Linux-based batch servers under multi-GPU settings
- Experienced in building Bayesian statistical models
- Full professional proficiency in English; native proficiency in Mandarin

Honors & Awards:

- **Meritorious Winner**, Mathematical Contest in Modeling, 2016 (top 8% worldwide)
- **First Prize** of Elite Program Scholarship Award, 2015 (top 10% among Elite Program students)
- **Lu Dexin Award** of Nanjing University, 2018 (top 10% among Elite Program students)
- **Outstanding Student Award** (aka "**Dean's List**") of Nanjing University, both 2015 and 2016 (top 3%)

Leadership & Social Activities:

- **Student Member, Duke CS Faculty Search Committee** **2019.2- present**
 - In charge of informing students of the job talk and grad student meeting schedules
 - Lining up volunteers for escorts and collected student feedbacks
- **Vice President, Students' Union of Kuang Yaming Honors School** **2015.7-2016.7**
 - In charge of student academic activities; major contributions including organizing a university-level essay contest and 6 public lectures/seminars
 - Increased activity popularity (measured by number of participants) by 25% over the previous best record
- **Volunteer & Chinese tutor, the Amity Foundations, China** **2014.8-2014.8**
 - Received German volunteers and helped them go through the Summer Training Program (STP)
 - Worked as a Chinese language tutor for foreign learners in the Young Adult Program (YAP)
 - Studied elementary-level German language (around A2 Level by European standard)