Shen Zhuoran

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Education

The University of Hong Kong, *Hong Kong* *Sep. 2015 — Present*
Bachelor of Engineering in *Computer Science*

- CGPA: 3.97/4.30; standing: 1/111; major CGPA: 4.13/4.30.
- 3 years' Dean's Honours Lists. YC Cheng Engineering Scholarship.
- Courses: Computer Vision (A), Multivariable Calculus (A^+), Introduction to Linguistics (A^+).

University of California, Davis, *CA, United States* *Sep. 2017 — Dec. 2017*
Bachelor's Reciprocity Student in *Computer Science*

- GPA: 4.00/4.00.

Work Experience

Computer Vision Research Intern at ***SenseTime***, *Hong Kong* *Jan. 2018 — Present &*
Jun. 2017 — Aug. 2017

- Developed an internal PyTorch template that facilitated the team's transition from Caffe.
- Developed a stereo depth estimator based on PSMNet with improved training procedures. Achieved 2x increase over previous SotA on the Scene Flow dataset.
- Proposed *factorized attention*, an efficient self-attention mechanism applicable in CV and NLP:
  - achieved SotA performance on detection, instance segmentation, and stereo depth estimation;
  - submitted a first-author paper to CVPR 2019.

Projects

Visual Embedding of Chinese at ***The University of Hong Kong*** *Sep. 2018 — Present*

- Designing a novel model to improve Chinese embedding accuracy by utilizing visual features.
- Refactored a PyTorch embedding library. Achieved 70x speedup.

beauty-net *May 2018 — Present*

- Developed a PyTorch project template. Applied deduplication, modularization, and a consistent code style to improve maintainability, testability, and analyzability.
- Became 2nd most popular PyTorch template on GitHub with 180+ stars and trending for 3 days.

Awards

Second Runner-up in **ACM-ICPC Hong Kong PolyU International Invitational 2017** *Aug. 2017*

First Runner-up in **ACM-HK Programming Contest 2017** *Jun. 2017*

Preprint

Factorized Attention: Self-Attention with Linear Complexities *CVPR 2019*

Shen Zhuoran*, Zhang Mingyuan*, Yi Shuai, Yan Junjie, Zhao Haiyu (* Equal contribution)*

Skills

- **Languages**: Mandarin Chinese (native), English (116 in TOEFL).
- **Languages**: Python, C++, Java, Shell script, Markdown, LaTeX
- **Technologies**: PyTorch, Caffe, Git, Slurm, Django, Vim, CUDA programming