

# Zhao Wang

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## EDUCATION

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**Tsinghua University** Aug 2017 - May 2020  
Software Engineering Master of Engineering Beijing

- GPA: 3.46 / 4.0 (Rank: 13 / 95)
- Scholarships: 1 time institution-level scholarship at Tsinghua University (2018)
- Relevant Coursework: Digital Geometry Processing (4.0), Data Warehouse and Data Mining (4.0), Photorealistic Rendering Techniques (4.0), Computer Aided Geometry Modeling (3.7), Deep Learning (3.3)

**Tsinghua University** Aug 2013 - May 2017  
Software Engineering Bachelor of Engineering Beijing

- GPA: 89 / 100 (Rank: 12 / 57)
- Scholarships: 3 times institution-level scholarship at Tsinghua University (2014, 2015, 2016)
- Relevant Coursework: Calculus A (1) (92), Linear Algebra (2) (91), Probability and Statistics (90), Data Structure and Algorithm (1) (94), Web Front-end Technology (98), Software Engineering (1/2/3) (95/90/91), Architecture of Computer and Network (1/2) (92/93)

## PROFESSIONAL EXPERIENCE

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**Megvii Inc. (Former Face++)** Jul 2020 - Present  
Software Development Engineer Beijing

- [Python, Dev] Develop an intermediate tool inside an AI compiler toolchain to convert the numerical representation of a NN model from general float type to hardware specific(mostly integer) one.
- [Python, Dev] Develop the AI compiler toolchain frontend to integrate all of the intermediate tools from scratch.
  - Use Protobuf to integrate all the compile configs of each tool.
  - Make the project mature enough as a product.
- [Python, CI/CD] Take over the development of the cloud-based Gitlab CI/CD stage of the toolchain in order to trace the availability and correctness.
  - Use Flask to implement toolchain report website to display test result.
  - Use MongoDB as database to interact with frontend and backend.
  - Use Mypy(type check tool) to check and assure the code quality of project.
  - Use Docker to automatic release our toolchain product.
- [Python, Site Reliability] Design and implement the SLIs/SLOs of an internal cloud-based RPC service, help us better knowing the quality of this service.
  - Use Grafana & MongoDB to make the dashboard, make the problems easier to detect.

**Hulu LLC** May 2019 - Aug 2019  
Software Development Engineer Intern Beijing

- [Python, ML] Analyzed the initial CDN selection of online playback sessions, choose LightGBM to do the prediction job.

## PROJECT EXPERIENCE

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**Deep learning based CBCT medical image tooth segmentation** Sep 2019 - Mar 2020  
Python, Deep Learning

- Develop a 3D segmentation neural network extended from Mask RCNN based on Detectron2, which is an open-source framework by Meta.
  - Use PyQt to establish a GUI in order to make it usable.
- Compare to a level-set based semi-automated algorithm, precision is improved from 87.59% to 92.58%, recall is improved from 87.61% to 91.67%.

**Simple photo realistic ray-tracing renderer** Nov 2016 - Jan 2017  
C++, Rendering

- Implement rendering algorithms like ray tracing, path tracing, photon mapping, stochastic progressive photon mapping etc.
- Support features like reflection, refraction, depth of field, KDTree etc.

## SKILLS, CERTIFICATIONS & OTHERS

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- **Skills:** Solid expertise on Python3; fluent skills in C++, C.
  - **Languages:** English (CET-6)