

# Shiqin Yan

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## EDUCATION

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### Brown University, School of Engineering

Sep 2020 - May 2022 (Expected)

*Master of Science in Computer Science*

- Coursework: Design and Analysis of Algorithms, Deep Learning, Developing Modern Web Applications

### Northeastern University, School of Computer Science and Engineering

Sep 2016 – Jun 2020

*Bachelor of Engineering in Computer Science*

- GPA 3.84/4.00
- Coursework: Data Structures, C++ and OOP, Compiler Principles, Database Theory, Software Engineering
- Exchange Program: University of Pennsylvania, School of Engineering and Applied Science (2018)

## TECHNICAL SKILLS

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**Languages:** Python, C++, C, SQL, JavaScript, TypeScript, HTML/CSS, MATLAB, Kotlin

**Libraries:** Angular, React, Vue, Redux, Three.js, D3.js, Tensorflow, PyTorch, OpenCV, Fairseq

**Database :** MySQL, MongoDB, PostgreSQL, Neo4j

**Tools and Platforms:** Git, Docker, L<sup>A</sup>T<sub>E</sub>X, Sphinx, Node.js, Flask, NativeScript, Firebase, AWS

## WORK EXPERIENCE

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### Software Engineer

Nov 2019 – Jul 2020

*NiuTrans*

*Shenyang, China*

- Developed an web-based **visualization toolkit** for key mechanisms in neural machine translation techniques.
- Developed web demos for the toolkit gaining 2K+ views.
- Published the toolkit to PyPI repository and wrote detailed documentations to help users quickly get started.
- Contributed impressive visualization pictures to the company's pitch deck.

### Research Assistant

Jun 2018 – Sept 2018

*Chinese Academy of Sciences*

*Beijing, China*

- Developed a software for object segmentation in remote sensing images based on OpenCV.
- Increased efficiency of image processing by **over 80%** while achieving accuracy comparable to manual labeling.

## SELECTED PROJECTS

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### BrownBytes | JavaScript, React, Redux, Node, MySQL

Feb 2021 – May 2021

- Managed the development team with **Scrum** framework.
- Implemented a **mobile friendly** front end with React and Redux.
- Designed database schema and APIs for the back end.
- Implemented Google and Facebook SSO (single sign-on) feature with OAuth 2.
- Deployed the platform to AWS with Docker.

### Machine Translation Quality Estimation System | Python, PyTorch, Fairseq

Apr 2020 – Jul 2020

- Designed and implemented a data cleaning pipeline for the datasets in WMT20 contest.
- Implemented a novel neural network model with PyTorch to estimate the quality of machine translation results.
- Won **first place out of fifteen participating teams** in the English-German translation quality estimation task.

### Anime-style Movie Poster Generator | Python, Tensorflow, Neo4j

Jun 2019 – Aug 2019

- Developed a web crawler and collected 10,000+ anime-style movie posters.
- Designed and implemented an algorithm for identifying the most representative movie posters of every genres.
- Developed a pipeline to generate anime-style images given users' inputs with neural style transfer algorithm.
- Won the **Best Machine Learning Project Award** in NUS SOC Summer Workshop 2019.

## SCHOLARSHIP AND PUBLICATION

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- Outstanding Student Scholarship (2016 - 2019): Awarded for ranking in the top ten percent of school
- Publication: The NiuTrans System for the WMT20 Quality Estimation Shared Task. *Proceedings of the Fifth Conference on Machine Translation. Vol. 2. 2020.*