

ZECONG HU

Graduating 2020 Fall. Looking for Software Engineering Positions.

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EXPERIENCE

Software Engineer Intern

Petuum, Inc.

May 2019 – Aug 2019 Pittsburgh, PA

- Led a team of 4 in the development of Texar-PyTorch, a machine learning toolkit. Proposed coding guidelines and was in charge of quality assurance and code review.
- Designed the overall architecture of Texar-PyTorch. Contributed more than 30% of the entire code base.
- Contributed to the design and development of an internal NLP pipeline tool.

Graduate Research Assistant

Language Technologies Institute, Carnegie Mellon University

Aug 2018 – Ongoing Pittsburgh, PA

- Proposed a neural language model utilizing knowledge base relations to generate Wikipedia articles. Achieved state-of-the-art results over strong baselines on a large-scale open-domain dataset.
- Built a neural system for quality estimation (QE) of machine-translated text. The system was ranked 2nd on the WMT 2019 En-De sentence-level QE shared task.

PROJECTS

Texar-PyTorch

An open-source toolkit for machine learning and text generation

Apr 2019 - Aug 2019 [asyml/texar-pytorch](https://github.com/asyml/texar-pytorch)

- A machine learning toolkit in Python focused on neural methods for natural language processing, based on PyTorch.
- Project open-sourced on GitHub, gaining over 300 stars.

MercuryJson

Super-fast JSON parsing with SIMD and multi-threading

Apr 2019 - May 2019 [Somefive/MercuryJson](https://github.com/Somefive/MercuryJson)

- A fast, parallel JSON parser implemented in C++17, achieving 1.29x speedup compared to the state-of-the-art parser simdjson.
- Combined simdjson's two-stage parsing approach with a push-down automata accepting partial JSON strings, which allowed the parser to run in parallel over arbitrarily chunked inputs.

Weibo Analyst

A modern web app to analyze Weibo posts using NLP tools

Feb 2017 - Jun 2017

- Implemented a responsive frontend using AngularJS.
- Designed and coded the backend framework with Flask and MongoDB, and integrated NLP tools as framework extensions.
- Built a distributed work queue with Celery and RabbitMQ.

EDUCATION

M.S. in Language Technologies

Carnegie Mellon University

Aug 2018 – Aug 2020 (expected)

Pittsburgh, PA

GPA: 4.00/4.33 Advisor: Graham Neubig

B.Eng. in Computer Science

Tsinghua University

Aug 2014 – Jul 2018

Beijing, China

Major GPA: 90/100 Ranking: 32/152

AWARDS & HONORS



First Place

Bloomberg CodeCon, 2019

Grand Prize

InnovateAsia FPGA Design Contest, 2016

Gold Medal

ACM/ICPC Asia Regional Contest, Mudanjiang Site, 2014



Outstanding Graduate Award

Tsinghua University, 2018

Award for Excellent Leadership in Student Organizations

Tsinghua University, 2017

PUBLICATIONS

- Stack-Pointer Networks for Dependency Parsing
Xuezhe Ma, Zecong Hu, Jingzhou Liu, Nanyun Peng, Graham Neubig, Eduard Hovy
ACL 2018, Oral presentation
- SOURCE: Source-Conditional ELMo-Style Model for Machine Translation Quality Estimation
Junpei Zhou*, Zhisong Zhang*, Zecong Hu*
WMT 2019, 2nd place in QE shared task

SKILLS

Languages: C/C++ Python Java

JavaScript Rust CUDA Bash

Tools & Frameworks: Git LaTeX PyTorch

OpenCV TensorFlow Django Flask

SQLite MongoDB AngularJS