

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 the design and development of Texar-PyTorch, a machine learning toolkit. Contributed more than 30% of the entire code base, and was in charge of quality assurance and code review.
- 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 able to utilize knowledge base relations for generating Wikipedia articles. Research paper submitted to a top-tier conference.
- 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 🐙 [asym1/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](#)

- A fast, parallel JSON parser implemented in C++17, achieving 1.29x speedup compared to the state-of-the-art parser simdjson.
- The algorithm combines simdjson's two-stage parsing approach with a pushdown automata accepting partial JSON strings, allowing the parser to run in parallel over arbitrarily chunked inputs.
- Course project for CMU 15-618: *Parallel Computer Architecture and Programming*. Received full credits.

Weibo Analyst

A modern web app to analyze Weibo posts using NLP

📅 Feb 2017 - Jun 2017

- A website allowing Weibo users to analyze their posts using natural language processing techniques.
- Implemented the frontend as a modern web app using AngularJS. Designed and implemented the backend framework in Flask, and integrated NLP tools as extensions of the framework.
- Built a distributed work queue with Celery and RabbitMQ.

EDUCATION

M.Sc. in Language Technologies

Carnegie Mellon University

📅 Aug 2018 – Aug 2020 (expected)

📍 Pittsburgh, PA

GPA: 4.0 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, Tenth Place

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