

# XING JIE ZHONG

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## EDUCATION

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**University of Notre Dame** Notre Dame, IN  
Ph.D. Computer Science and Engineering expected May 2023  
Advisor: David Chiang

**University of Colorado at Boulder** Boulder, CO  
B.S. Electrical and Computer Engineering May 2014  
Minor: Computer Science  
*Magna Cum Laude*

## RESEARCH EXPERIENCE

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**University of Notre Dame** Notre Dame, IN  
*Graduate Research Assistant, Natural Language Processing Lab* Aug 2018 – Present

- Programmed Dictionary attachment transformer architecture to improve neural machine translation with dictionaries. (Part of paper accepted to WMT 2020)
- Programming multi-task neural machine translation models in PyTorch to translate text and read dictionaries simultaneously.
- Developing code for transformer encoder and single layer attention decoder to predict word embeddings.
- Participated in LORELEI (Low resource language for emergent incidents) 2019 evaluation

**University of Colorado at Boulder** Boulder, CO  
*Undergraduate Research Assistant, Correll Lab* (Sep 2013 – Sep 2014)

- Prototyped soft robotics actuator and soft circuits using solid works and 3D printer.
- Produced first functional fully-embedded elastomer circuits

**Harvard University** Cambridge, MA  
*Undergraduate Research Assistant, Microrobotics Lab* (Jun 2012 – Aug 2012)

- Developed both mechanical and electrical design of a successful new robot prototype.
- Fabricated mechanical structures using a laser cutter and produced circuits using Etched Copper.
- Presented research results at the end of summer to the REU program and lab.

**University of Colorado at Boulder** Boulder, CO  
*Undergraduate Research Assistant, Programming Development Lab* (Feb 2012 – May 2013)

- Ran test and collected data of a BLAS optimizing compiler.
- Wrote scripts to parse and process data files in Matlab
- Compiled data into graphs of computer performance and noise.

- Attended SIAM CSE 2013 conference for poster presentation.

## PROFESSIONAL EXPERIENCE

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**Keysight Technologies** Colorado Springs, CO  
*R&D Test Development Engineer* Jun 2015 –Jul 2018

- Developed tests for new product lines and ported existing tests into new systems and using new software (Labview and Teststand).
- Supported the production team by training technicians to run, test, and debug various product issues.
- Set up and calibrated new test racks and develop procedures for new test systems.
- Collected and processed product and system data for the validation of new systems.

**Level 3 Communications** Lone Tree, CO  
*Java Middleware Developer* Sept 2014 - Jun 2015

- Configure and upgrade existing software systems.
- Work within a large team to deploy new software features and debug system-level issues.

**Sandia National Laboratory** Albuquerque NM  
*Summer Intern, Robotics Division* Jun 2015 - Jul 2018

- Designed and implemented methods to switch motor configurations for efficiency test.
- Collected, processed data on sensors and calibrated sensors using neural networks.

## TEACHING EXPERIENCE

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**University of Notre Dame** Notre Dame, IN  
*Teaching Assistant, Computer Science and Engineering* Aug 2018 – Present

- Coordinated and taught lab sections for Data Structures class.
- Assisted Students in debugging and programming assignments
- Assisted Professor in manage absences and regrades
- Graded weekly assignments, programming projects, midterms, and finals.

**Rocky Mountain Chinese School** Broomfield, CO  
*Teaching Assistant* Aug 2008 – May 2009

- Volunteered to help teach elementary school students age 5 to 12 weekly 2-hour course Chinese every Sunday.
- Provided individualized instructions and corrected their pronunciation (Mandarin) and writing.

## PUBLICATIONS

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Look it up: Bilingual and Monolingual dictionaries improve neural machine translation.  
(accepted to WMT 2020)

## **PRESENTATIONS**

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Look it up: Bilingual and Monolingual dictionaries improve neural machine translation. Paper  
Presentation at WMT 2020  
Effects of Population Size on Genetic Algorithm in BTO BLAS Poster Presentation  
at SIAM CSE 2013

## **HONORS & AWARDS**

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Magna Cum Laude	2014
Dean's List every semester	2010-2014

## **SCHOLARSHIPS**

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Tau Beta Pi Scholarship (\$2500)	2014
Trio Alliance Scholarship (\$1000)	2010
BOLD scholarship (\$500)	2010
Engineering Merit Scholarship (\$6000)	2010-2013
First Generation Scholarship (\$8000)	2010-2014
Asian Pacific Islander Scholarship (\$2500)	2010

## **ACADEMIC SERVICE**

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Reviewer for ISEC 2019 9th IEEE Integrated STEM Education Conference	2019
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## **PROFESSIONAL AFFILIATIONS**

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Social Chair for Graduate Student Union - University of Notre Dame	2020 - 2021
President of Eta Kappa Nu - University of Colorado Boulder	2013 - 2014
Secretary of Tau Beta Pi - University of Colorado Boulder	2011 - 2013