

Terry Zhuo

NLP RESEARCHER · PROGRAMMER

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“DWIC is never enough!”

Summary

Current Computer Science Undergraduate at UNSW. Experience in digital signal processing, quantum computing and natural language processing. Research interests lie in question answering, language model and vision-language grounding. Super nerd who loves Python, C++ and Linux and enjoys to customize all of the development environment. Interested in devising a better problem-solving method for challenging tasks, and learning new technologies and tools if the need arises.

Work Experience

Harrison.ai

Sydney, Australia

APPLIED AI SCIENTIST INTERN, SUPERVISED BY **Ben Hachey**

Dec. 2020 - Present

- Develop AI algorithms, prototypes and solutions for **Prioritization of patients' CT Brain reports.**
 - Entity(vector) semantic fuzzy search via sense2vec + scispacy + stanza + fasttext
 - Contextual word(embedding) semantic search via domain adaptive DistilBERT in an unsupervised fashion
 - Mean Pooling sentence(embedding) semantic search via domain adaptive DistilBERT in an unsupervised fashion
 - Sentence(vector) semantic search via BioSentVec + fasttext
 - Sentence(embedding) semantic search via DistilBERT (with BERT-flow)

Data61, CSIRO

Remote

EXTERNAL RESEARCH STUDENT, SUPERVISED BY **Conrad Sanderson**

Dec. 2020 - Present

- PyArma, a API library of **Armadillo** using Python-C++ bindings
 - Write and design under the product development flow with the Data61 vacation scholar.
 - Open-source minimum viable product(MVP) at the first stage.

Monash Univeristy

Remote

RESEARCH ASSISTANT, SUPERVISED BY **Reza Haffari** AND **Lizhen Qu**

May. 2020 - Present

- Project: **Commonsense Reasoning Question Answering**
 - Apply ProphetNet as the backbone for the model trained on ATOMIC data.
 - Evaluate the proposed model results.
 - Co-author a long paper in COLING 2020.
- Project: **Construction of a Multimodal Procedural Knowledge Base for Action Planning**
 - Design and collect crowdsourcing data via Amazon Mechanical Turk.
 - Design the baseline and propose a multimodal action planning model via the knowledge base.

UNSW Sydney

Sydney, Australia

CASUAL ACADEMIC/TUTOR

Feb. 2020 - Present

- ENGG1000**: Introduction to Engineering Design and Innovation:
 - 20T1, 20T3(100% student satisfaction), 21T1
- ELEC2134**: Circuits and Signals:
 - The only undergraduate in the team while remains are PhDs.
 - 20T1, 20T3, 21T1
- COMP2521**: Data Structures and Algorithms:
 - 21T1

Quantum Computation and Communication Technology (CQC2T), UNSW Sydney

Sydney, Australia

RESEARCH STUDENT, SUPERVISED BY **Arne Laucht**

Nov. 2019 - Sep. 2020

- Propose a research project of digitizing the lock-in amplifier in MATLAB.
- Propose the implementation structure of the digitizing lock-in amplifier in the team's quantum computing system.

Microsoft

Shanghai, China

SOFTWARE ENGINEERING INTERN

Dec. 2019 - Feb. 2020

- Apply Azure SQL DB/DW, Azure Data Lake Storage, Azure Data Lake Analytics, Azure Machine Learning, Stream Analytics, Azure Data Factory, or Cosmos DB to companies' data.
- Design cloud architecture for top tier companies.
- Strongly recommended by **Michael Wang**.

Project

Off-world Robotics Project, Vertically Integrated Project

RESEARCHER

UNSW Sydney

Feb. 2020 - Present

- Determine the constraints of our embedded systems, sourcing embedded boards for use on the prototype rovers, and testing them with an RTOS or scheduling architecture.
- Research existing approaches to the SLAM problem, comparing them, and proposing a SLAM system for use on the rovers.

Py Googletrans

CONTRIBUTOR, COLLABORATOR

Github

May. 2020 - Present

- **Star: 2.0k**
- **Fork: 408**
- Googletrans: Free and Unlimited Google translate API for Python. Translates totally free of charge.

Sphinx Markdown Builder

CONTRIBUTOR

Github

May. 2020 - Present

- **Star: 79**
- **Fork: 28**
- Sphinx builder that outputs markdown files.

Education

UNSW Sydney (University of New South Wales)

B.S. IN COMPUTER SCIENCE AND ENGINEERING (MINOR IN ELECTRICAL ENGINEERING)

Sydney, Australia

Jul. 2018 - Sep. 2021(Expected)

- Weighed Average Mark 86.3, Top 2% in Faculty of Engineering

Extracurricular Activity

BLUESAT

POWER ENGINEER

UNSW Sydney

Oct. 2019 - Present

- Working on the satellite project which will be launched in 2021-2022.
- Supervising in MPPT board testing and designing.

ELSOC UNSW

ACADEMIC TUTOR, SUB-COMMITTEE MEMBER

UNSW Sydney

May. 2019 - Present

- Ran crashcourses (lectures) where more than twenty students on average attended.

Publication

COSMO: Conditional SEQ2SEQ-based Mixture Model for Zero-Shot Commonsense Question Answering

COLING 2020

FARHAD MOGHIMIFAR, LIZHEN QU, YUE ZHUO, MAHSA BAKTASHMOTLAGH AND GHOLAMREZA HAFFARI

Honors & Awards

- 2019 **Dean's Honours List (Highly Commended)**, Top 2% of UNSW Engineering
- 2019 **Taste of Research scholarships Recipient (A\$5,000)**, TOP 12 of UNSW Engineering
- 2020 **Taste of Research scholarships Recipient (A\$6,000)**, TOP 43 of UNSW Engineering

Sydney

Sydney

Sydney

Service

- 2020 **Volunteer**, EMNLP 2020
- 2020 **Volunteer**, NeurIPS 2020
- 2020 **Volunteer**, WiNLP 2020

Online

Online

Seattle, WA