

# MUZI WANG

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Software Engineer Internship

## EDUCATION

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- Carnegie Mellon University, Entertainment Technology Center (ETC)** Aug 2019 - Jun 2021  
Master of Entertainment Technology
- Tsinghua University, Department of Computer Science** Sep 2015 - Jun 2019  
Bachelor of Computer Science and Technology
- Selected Coursework:** Software Engineering, Data Structures, Programing and Training, Computer Organization, Building Virtual World, Theory of Computer Network and Fundamentals of Computer Graphics.

## SKILLS

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- Languages** Python, C++, Java, C#, JavaScript, HTML5, CSS, MATLAB, Qt, VHDL, R
- Technologies** Apache Tomcat, Node.js, JUnit, Web Programing, React, Redux, Wepy, RESTful API, MySQL
- Platforms** Android, Unity, HTC Vive, Magic Leap, PaddlePaddle, Pytorch, Tensorflow, Linux/Unix, Git, L<sup>A</sup>T<sub>E</sub>X

## INTERNSHIP

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- Microsoft, Speech Group of Microsoft Research Asia, Beijing** Feb 2019 - Jun 2019
- Worked on Chinese grammatical error diagnosis task with **Machine Learning**.
  - Creatively applied pre-trained model ‘BERT’ to our system with **PaddlePaddle**, and proposed strategies for model structure improvement, which outcompeted the State-Of-The-Art Model on the NLP-TEA CGED data set in comparative experiments. Some ensemble models were further proposed to aggregate the advantage of different strategies.
  - Implemented a data augmentation method combining with Byte Pair Encoding to solved the problem of insufficient Chinese annotated data. Made ‘Transformer’ a word-and-character level generative model with **Tensorflow**, and built an online Chinese error correction website with **Flask** based on that model.
- JD.COM, Big Data and Intelligent Supply Chain Division, Beijing** Sep 2018 - Oct 2018
- Mined data and analyzed the characteristics of online chat records with **Python**.
  - Used **Pytorch** in **Natural Language Processing** to implement deep neural network which can pre-judge the probability of leapfrogging complaints through chat records, allowing customer service to take timely measures.
  - The product has been launched inside JD.COM and is being used by customer service of JD online mall to reduce complains.
- Tencent, Technology Engineering Group, Shenzhen City** Jul 2018 - Aug 2018
- Contributed defensive code to a WeChat Mini Program, which designed to addresses the pain of WeChat group management and incorporate Tencent’s existing knowledge sharing system. It has be launched by Tencent.
  - Designed the UI and API (**RESTful API**), used **HTTP protocol** for communication with back-end, used WeChat Developer Tools, **Wxml**, **Wxss**, **Wxs** and **JavaScript** for front-end development, ensured the efficiency of development and exquisiteness of products by **Wepy** framework and **Iview** components.

## SELECTED PROJECTS

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- Building Virtual Word (ETC) (Academic Projects)** Fall 2019
- Created six **HTC Vive** or **Magic Leap** games on **Unity** with **C#** with four other teammates.
  - A project-based class which contains 6 rounds, where five people form a team to build **VR/AR** game intensively. Teammates rotate each round (two weeks) to enhance **teamwork**, **communication**, and **iteration** ability.
- Google Girl Hackathon Season V, Beijing - Game “Splendor” (Personal Project)** Spring 2019
- Designed the API (**RESTful API**) and game strategies for our team. Built the framework of the game with **Python** language programming, implemented the strategy functions of the game and did the test. Our team earned 2nd price.
- ASDAN Business Simulation Online Platform (Academic Project)** Fall 2018
- Designed the UI and API (**JSON**) for the client app which can manage the business competition process and data.
  - Used **Node.js** for client application’s front-end development, **React** framework for user interface, **material UI** for uniform and exquisite components, **Redux** framework for predictable state management, **HTTP protocol** for back-end communication, and also **Websocket** to listen to a port for receiving pushed messages from the back-end.
- Mobile Android News App (Academic Project)** Summer 2017
- Used comprehensive skill-set to develop an **Android** news app based on **Apache Tomcat** server with **Java**, which allows users to choose, save and search news by keywords, and generate personalized recommendations according to users’ history.
  - Used **Material Design** for UI, **MySQL** for database to manage news and users’ history records, and **JUnit** for unit tests.