Curriculum Vitae

Chuer, CHEN

E-mail: chuerchen1998@gmail.com | Objective: PhD | Website: https://chuer-chen.netlify.app

Education

Beijing Institute of Technology (BIT), P.R. China 09/2016-07/2020

- BSc in Electronic Information Engineering.
- GPA: 3.74/4.0 (grades ranking 5/94)

National University of Singapore Suzhou Research Institute (NUSRI), P.R. China 09/2019-05/2020

- Exchange student in Electrical & Computer Engineering.
- Average Mark: 91.40

National University of Singapore 08/2020-07/2021

- MSc in Electrical & Computer Engineering.
- GPA: 4.25/5.0 (Distinction)

Research Experience

Narrative Chart: Facilitate Data Storytelling With A High-Level Action-Driven Grammar

Research Assistant in IDVx Lab advised by Prof. Nan Cao, Tongji University 07/2022-Present

- Participated in the development of a open-source visualization library specialized for authoring charts.
- Developed a data expression generation platform for the national ping-pong team.
- Conducting a survey on music visualization.

U.S. Patent Phrase to Phrase Matching

Kaggle Competition 06/2022

- Analyzed the relationship of the word pairs and combined the semantic relative data source as the input. Used cross-validation strategy and made train data stratified by score, grouped by anchor.
- Made the fine-tuning of DebertaV3/large model and trained it with BCELoss. Averaged the predictions of each fold's best model to get the score. The final result reached 0.8548 on the test set.

Control Strategies of Path Tracking Problem for Autonomous Driving

Advised by Prof. Xiang Cheng, National University of Singapore 09/2020-04/2021

- Build the vehicle kinematics model and dynamics model. Realized LQR controller and MPC controller based on the vehicle models to control the vehicle motion following the track.
- Introduced differentiable MPC algorithm and applied it to realize lateral control of the vehicle. PID controller was used as the longitudinal controller.
- Compared four controllers based on their performance of path tracking problem in CARLA simulator.

Self-powered triboelectric-based smart gloves for hand gesture recognition using deep learning

Advised by Prof.Chengkuo Lee, National University of Singapore Suzhou Research Institute 09/2019-05/2020

- Made hemispherical triboeleactric sensors and attached them on the 3D-printed gloves.
- Built an Augmented Reality scene in Unity to realize the control of the hand model.
- Built CNN model to recognize hand gesture by training one-dimensional signals. The validation accuracy of recognition is up to 99.375%.
- Use TCP/IP to transimit data between Python and Unity, so as to realize real-time control of objects in AR scene by gesture recognition result.

Work Experience

Frontend Engineer

Alibaba Group 07/2021-05/2022

- Optimized and iterated the No-Code platform that enable businesses to develop web page quickly without coding. Created some drag-and-drop components liks text, picture, etc.
- Developed a new type of no-code web page building mode combined with rich text editor for picture-text web page. More than 300 pages have been created by this mode.

Extracurricular Activities

Student Union Activities

Served as the minister of International Communication Association in BIT's student union. 06/2017-06/2018

Social Practice

- Participated in Interactive Media summer camp of Tsinghua University. 07/2019

Awards

- "Beijing Excellent Graduate" title for top 2% students. 05/2020
- BIT's "Huawei" scholarship. 11/2018
- First-class scholarship for top 5% students. 03/2017 & 09/2017 & 09/2018
- Second prize in Beijing Digital Integrated Circuit Design Contest. 06/2018
- Honorable Mention in the Interdisciplinary Contest in Modeling (ICM). 04/2018
- BIT's "Huarui Century Outstanding Student" scholarship. 12/2017

Certificate & Programming Skills

Certificate: Deep Learning (Coursera)
Proficient in Python, Javascript, HTML, CSS
Fairly experienced in Pytorch, TensorFlow & Keras, MATLAB, C++/C.
Intermediate level in C#, Unity, Linux, MySQL, Verilog/VHDL.
Language: TOEFL(101), GRE(330)