

Shuo Qu

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EDUCATION BACKGROUND

Beihang University

Beijing, China

09/2017 - 06/2021

Degree: Bachelor of Engineering in Computer Science

Dual Degree: B.S in Mathematics

Overall GPA: 3.44/4.0

RESEARCH EXPERIENCE

The Implement and Design of Diabetes Medicine Recommendation System

Beijing, China

12/2018 - 05/2019

Beihang University ACT Laboratory **Advisor:** Dr.Jianxin Li

Description: To establish an intelligent system that can personalize the medicine therapeutic regimen by machine learning

- Consulted related papers to grasp methods of diabetes drugs recommended by machine learning
- Designed training data, wrote data processing script with python and realized data automatic processing
- Selected a suitable model from lstm, xgb and lgb models
- Tested the trained model with test set

ACADEMIC EXPERIENCE

MIPS Assemble Pipeline CPU Design

Beijing, China

09/2018 - 12/2018

Advisor: Xiaopeng Gao

- Analyzed instructions that needs to be realized and classified them
- Designed data paths for instructions, components, CPU parts, including PC, IM, Register, DM, ALU, etc. and realized these parts with Verilog
- Conducted CPU structure hierarchy, added pipeline registers, designed CPU controller to transmit control signal
- Adopted T_{use} and T_{new} models to avoid data hazard
- Wrote MIPS assembly program to test CPU on ISE software

Warehouse Management System

Beijing, China

09/2019 - 12/2019

Advisor: Bo Lang

- Analyzed requirements and needed functions, including user login, warehouse and product adding/deleting, product schedule, order and customer adding/deleting, customer information management, orders chart display, etc.
- Developed the front end with react and its basic layout, designed resetful API
- Designed the back-end database, involving entity, entity property and relations among entities; and used mysql to conserve data
- Developed the back end using Python(django) framework and wrote codes
- Used git to conduct version management and cooperative development, managed codes with github and updated new required functions on issue

COMPETITION EXPERIENCE

Fengru Cup Science and Technology Contest of Beihang University

Beijing, China

11/2018 - 05/2019

Project: Automatic Annotation Generation Software for Java **Advisor:** Xu Wang

Role: Leader

Award: Third Award

Description: Annotations are automatically generated for Java through deep learning nlp programs, and integrated as a plugin for java IDE IDEA, which provides the function of automatically generating comments after IDEA user code

- Used web crawler to acquire 20G data of Java codes and annotation from Github by start rating for training
- Conducted data processing with Python, paired data by python, and separated training data from testing data
- Read relative papers, reproduced sequence2sequence model using pytorch
- Trained this model with training data on a distributed cluster to train fast
- Applied Java to package a plugin for IDEA, which could realize the automatic annotation

Role: Leader

Award: Top 3%

Objective: To predict the sales volume in the next 4 months of each province and vehicle module

- Analyzed the sales of 60 vehicle models in 22 provinces, and the search volume of each vehicle model in each province in the past 4 months
- Used sliding window to build feature, and calculate the correlation rate among variables and then remove low-correlation variable from feature
- Divided trained data into training set and testing set
- Used lstm, xgb, lgb models to train data and get the sales of next month

INTERNSHIP EXPERIENCE

Beijing SenseTime Co. Ltd.

Beijing, China

03/2020 - 09/2020

Position: Intern Algorithm Engineer

- Was responsible to establish pipeline frame of deep learning which dispatch each specific functional element such as image classification, object detection, and booster in mimic and nas
- Read papers and made mimic algorithm appear
- Conducted tools docking and used mimic to enhance the accuracy of tracking tools
- Completed docker and gitlab-CI building in a group

HONORS & AWARDS

- 2017 **National Scholarship for Encouragement,**
- 2018 **Second Prize,** Best Learning Scholarship of Beihang University
- 2018 **Second Prize,** Social Work Scholarship of Beihang University
- 2019 **Second Prize,** Science and Technology Contest Scholarship of Beihang University
- 2018 **Excellent Student Leader of Beihang University,**

PROFESSIONAL SKILLS

DevOps Docker, CI

Back-end Django, REST API

Front-end Vue, HTML5, Javascript

Programming Python, C/C++, Java, Typescript, LaTeX, SQL

Technical Skills Git, Linux(ubuntu), Deep learning, slurm, ceph

EXTRACURRICULAR ACTIVITIES

Vice President of Student Union Innovation and Entrepreneurship Center

Member of Street Dance Club and Tennis of Beihang University from 09/2017 to 12/2018