Mr. Cheng Guo

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EDUCATION

University of California, Berkeley – Master of Engineering in EECS   California, America
Scholarship of 2021-2022 academic year: $15,000   Aug 2021-May 2022
Beijing Normal University - Bachelor in Electronic Information Science and Technology   Beijing, China
Overall GPA: 88.38/100, Rank：2/18   Sep 2016-Jun 2020

SKILLS

- Programming languages: Python, C++, JavaScript, TypeScript, HTML, CSS
- Platforms/Libraries: Django, Selenium, Pandas, MySQL, Linux, Nginx, PyTorch, Sklearn, OpenCV

WORK EXPERIENCE

Shenzhen Pattern Technology Co. LTD – Fulltime Software Development Engineer   Beijing, China
Full Stack development   10/2020-3/2021
- Implemented user login, registration and password retrieval functions using **Django** frame.
- Designed backstage management system combined with **Xadmin** package to manage user and online course information. Assigned privilege based on users' roles.
- Developed **TypeScript** APIs to display videos and slides from Baidu AI Cloud DOC and VOD servers, which increased loading time from average **300ms+ to 70ms**.
- Realized **python** scripts to upload slides and videos to Baidu AI Cloud server in a batch, which improved the efficiency of uploading resources by **hundreds of orders magnitude**.
- Assisted with website deployment on Ubuntu server using **Nginx** and **uWSGI**.

Data crawling   3/2021-6/2021
- Crawled online data about Chinese university information and admission score, and save at local **MySQL** database.
- Used **Selenium** library to overcome **asynchronous data rendering (Ajax)**.
- Applied **dynamic request header** and **dynamic IP** technology to combat anti-crawler.
- Designed multithreaded crawler programs to increase crawling speed from **1school/10m to 32schools/10m**.

INTERNSHIP EXPERIENCE

Same- and Cross-Database Machine Learning Based ECG Signal Classification   Saudi Arabia
Research Internship at **The King Abdullah University of Science & Technology**   8/2020-1/2021
- Realized Pan-Tompkins algorithm in **Python** to extract the heartbeats from online ECG datasets.
- Extracted **Autoregressive** model coefficients combined with statistical parameters as sample features from separated heartbeats.
- Designed different machine learning algorithms to do Same- and Cross-Database experiments using **Sklearn** and **PyTorch**, which reached accuracy of **99.7% for same** and **91.3% for cross-database** tests.

Robot Vision Positioning Navigation-Chinese Academy of Science   Beijing, China
Research Internship at **The National Laboratory of Pattern Recognition, Institute of Automation**   4/2019-12/2019
- Changed code from **Python** to **C++** to facilitate transplanting to the robot chip.
- Detected moving projects with moving background, extracted objects' motion information in the camera by gradient point-based optical flow, and systematically analyzed the optical flow distribution of the entire image in **Python**.
- Designed background compensation algorithm to locate interesting objects using **OpenCV** and improved locating speed from average **40FPS to 60+FPS**.

PUBLICATIONS

- A Novel Posture Reminding System based on GA-BP Neural Network Classification *(IEEE M&N 2019)* ([Link](#))
- Design and Implementation of a Face Recognition System Based on Edge Computing, *(EATNCE 2019)* ([Link](#))
- A LSTM Network-based Learners' Monitoring Model for Academic Self-efficacy Evaluation, *(ICBDA 2020)* ([Link](#))