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chen-yi-huang

CHEN-YI HUANG

Dedicated software engineer, persistent learner and enthusiastic open source contributor. Strong in Python and experienced with large-scale software code reading and tracing (E.g., CPython, PyTorch & Buddy System in Linux kernel). Seeking a position as a xxx engineer at xxx Inc, where I can apply my skills of web development, data science knowledge and modern software development experience.

Skills

Data Science	Pandas, NumPy, PyTorch, Data Preprocessing, Data Visualization
Web Devs	Laravel, Vue, MySQL, MongoDB, PHPUnit, Python unittest
System & Tools	Linux, Git, Docker, Gitlab Runner, Travis CI
Programming	Python (proficient), JavaScript, C, C++, Rust
Language	Chinese (native), English (TOEIC 725)

Work Experience

Oct 2020–Jan 2021 **CIM Automation Engineer**, TSMC *Hsinchu, Taiwan*.

- Responsible for developing the agent and reporting APP for **thousands** of users in FAB.
- Developed the web crawler to download **hundreds** of candidate resumes and general resume parser which achieved up to **95%** extracted information accuracy.
- Wrote integration-test under possible scenarios and detailed documents including building procedure and class diagram for senior's project.
- Pioneer of Robotic Process Automation and efficient multi-language support for reporting APP.

July 2018–Jan 2019 **Web Developer**, CS Computer Center, NCTU *Hsinchu, Taiwan*.

- Developed web services for **hundreds** of CS students, especially for Account Application System.
- Cooperated with teammate to discuss and design the suitable database schema and API routing.
- Participated and learned modern software development including testing, deployment, virtualized environments and CI/CD.

Education

2018–2020 **Master of Data Science**, *Institute of Data Science & Engineering*, National Chiao Tung University, Hsinchu, Taiwan.

2014–2018 **Bachelor of Science**, *Department of Computer Science & Engineering*, Yuan Ze University, Taoyuan, Taiwan.

Open Source Contributions

- Found the redundant calculation of derivative of power function in various deep learning frameworks. @ PyTorch, JAX, Autograd
- Complete the serialization and deserialization of struct in Golang @ go-bbs
- Improved and beautified one of the example @ Yew
- Developed some code to be more Pythonic. @ TensorFlow
- Bug reporting @ Python extension for Visual Studio Code
- Participation of issue discussion. @ Windows Subsystem for Linux

Projects

Oct 2020 **General Resume Parser**.

- Candidates information reporting designed for human resource and administrator.
- Developed the resume crawler, defined the possible patterns and extracted needed information among **hundreds of** resumes.
- Covered **95%** extracted information accuracy for unstructured information such as work experience and education.

June 2020 **Real-time Traffic Anomaly Detector**.

- Anomaly detection in NCTU administration networks.
- Designed and implemented the data pre-processing pipeline with Apache Kafka, Spark and MongoDB.
- Processed data-stream in real time up to **30 kB/sec** and transformed into feature vectors to further predict.

Sep 2019 **Music Recommendation System**.

- Recommendation System using KKBox WSDM data
- Collected the additional data from Spotify and preprocessed them.
- Implemented the web-based interface to visualize the recommendation and user preference.

Sep 2019 **AutoDiff from Scratch**.

- Simple neural network library supporting auto-differentiation
- Reported an issue and solved it in various deep-learning libraries during the development.
- Enabled high-level layer usage and had already tested on real-world dataset.

Sep 2018 **Account Application System**.

- Web service for NCTU CS students to apply their account
- Developed in Laravel MVC architecture with additional Repository pattern.
- Designed the database schema.
- Implemented the business logic and account-activation-status API.

Master thesis

Title *Solving Traveling Salesman Problem with the Kernel-enabled Attention*

Supervisor Shi-Chun Tsai

Description We built on top of the prior state-of-the-art work who borrow the Transformer to solve the TSP. Motivated by the implicit dot product inside the kernel methods, we replace the scaled dot product with kernel in the attention mechanism. In our experiment, we archive shorter tour with a similar approach.

Certification & Award

- Arctic Code Vault Contributor @ GitHub
- Machine Learning with TensorFlow on Google Cloud Platform
- Querying Data with Transact-SQL