YUWEI ZHANG

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EDUCATION

Duke University, Durham, NC *Aug. 2020 - May. 2022*
Master of Interdisciplinary Data Science *GPA: 3.83/4.0*

National University of Singapore, Singapore *Jan. 2020 - Jul. 2020*
Computer Science Master Candidate *GPA: 4.50/5.0*

Tsinghua University, China *Aug. 2011 - Jul. 2015*
Bachelor of Engineering in Environmental Engineering *GPA: 3.75/4.0*

SKILLS

Programming: Python, Java, Shell, HTML, CSS, SQL
Database: MySQL, PostgreSQL, Redis
Machine Learning: Scikit-learn, PyTorch, TensorFlow, NLP, AWS Certified Machine Learning Specialty
Techniques: Linux, Git, Docker, Flask, AWS, Spark, Slurm, OOP, REST API, Distributed Computing, Asynchronous I/O, Agile Development

RELEVANT EXPERIENCE

Facebook AI Research, Facebook Inc. *May. 2021 - Aug. 2021*
Software Engineer Intern *Menlo Park, CA*
Project: Automated Machine Translation Toolkit
- Developed a multilingual **machine translation** toolkit compatible with various **Pytorch** models, with command-line tools for data pre-processing, training, evaluation
- Increased the speed of the entire pipeline by over 20 times through **asynchronous** I/O and processing
- Utilized **Hydra, OmegaConf** to support configuration inheritance, override and sweep with YAML
- Proposed and coded **snapshot** solutions for consistency in long-term and large-scale distributed training
- Added unit test system with demo data, hierarchical config groups for robustness and quick experiments
- Used **Slurm** to manage weeks-long training jobs in 300 languages and hundreds of TB data on **large-scale compute clusters**

DianRong Information Technology Ltd., top fintech company *Jun. 2018 - Dec. 2018*
Software and Algorithm Engineer *China*
Project: Python and Flask based Tarot Divination App
- Designed and implemented a tarot divination app providing online predicting service with Flask, used SQlAlchemy to interact with MySQL database
- Created a series of **social features** and **game currency mechanisms** to boost user engagement, achieved 120,000 registered users and 2,500 daily unique visitors without any marketing expenses

Project: Python based Customer Service Inspection System
- Built Smart Inspection System to monitor customer service calls with REST API, deployed with **Docker**
- Designed and developed the backend architecture, communication mechanism, and database of the system
- Enhanced **data security** by implementing user data encryption and hierarchical permission levels

Think Tank 2861 Information Technology Ltd., governmental IT advisory *Jul. 2017 - Apr. 2018*
Software and Algorithm Engineer *China*
- To collect 60 million reviews from popular social media platform, developed a **distributed multi-threaded** crawler in Python, deployed on Alibaba-cloud and stored crawled reviews in PostgreSQL
- Constructed a dynamic **opinion analysis model** to assess County Government performance and achieved 90% positive rate in user feedback
- Established an official **social network** with 144,504 hierarchical connections, devised recommendation function by inferring potential connections