HAO FENG

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EDUCATION

University of California, San Diego (UCSD)   La Jolla, CA
M.S. in Computer Science   *Sept. 2021 – June 2023(expected)*

University of Electronic Science and Technology of China (UESTC)   Chengdu, China
*B.E. in Computer Science; GPA: 3.98/4, WAM: 92.1/100, **Ranking: 1/242***   *Sept. 2016 – July 2020*

PROFESSIONAL EXPERIENCE

Nokia R&D Center   Hangzhou, China
Software Engineer, Scrum Master   *Aug. 2020 – June 2021*

- Led a scrum team of eight members and developed *Gatekeeper*, a web application powering R&D closed-loop system by checking errors in Nokia's 5G design documents, from scratch. Designed the architecture of back-end, front-end, testing and CI/CD, implemented it with **React**, **Spring Boot** and **MongoDB**, deployed **vSphere** and **Jenkins** services and **dockerized** them, serving 1k+ system engineers in 5G's global team.
- Refactored the daily report-generating python scripts interacted with 100k+ Nokia's employees records per day following **Clean Code**, optimized the structure by replacing redundant SQL queries with an independent **LDAP** traversal and maintenance service and introducing reusability and scalability by providing several APIs, reducing the average running time **from 2h to 39s ↓**.
- Devised a method to optimize workflow by collecting progress data of features from Power BI and Gerrit and generating slides automatically, designed a multi-threaded crawler application in Python with **PyQt**, **Requests**, **Selenium** and **Multiprocessing**, reducing **a man-day ↓** in every two weeks.
- Designed a **RESTful** file transfer proxy, coded in Java with **Jersey** and **Tomcat**, and opened a channel to allow users without permission to obtain files remotely.
- Implemented workflow tool-kits such as HTML automatic generator, email robot, mock testing, DAO helper, authentication module disassembled from 50k+ lines of VBA code, etc., **promoted them within CI teams of Nokia.**

School of Computational Science and Engineering, Georgia Institute of Technology   Atlanta, GA
Research Assistant, Supervised by Prof. Chao Zhang   *July 2019 – Oct. 2019*

- Proposed a novel dependency paths structure to encode connection of node paths found in taxonomies with **RNN**, and devised heterogeneous self-supervised learning structures to capture implicitly related information.
- Processed 16GB+ Wikipedia corpus with **Berkeley DB** and developed the model with **Pytorch**, which improved accuracy rate by 25% compared with traditional methods on SemEval-2016 Task 13.
- **Publication:** *STEAM: Self-Supervised Taxonomy Expansion with Mini-Paths*, accepted by *Proc. KDD*, 2020.

Institute of Computing Technology, Chinese Academy of Sciences   Beijing, China
Research Assistant, Supervised by Prof. Xiang Ao   *Dec. 2018 – Mar. 2019*

- Established a **capsule network** model CAPSAR, which communicates with other capsules through a sharing-weight routing algorithm to improve aspect-term level sentiment analysis, and detected potential aspect terms through de-capsulizing the vectors in capsules.
- Fine-tuned **BERT** on **Colab** and designed experiments with **Keras** on SemEval-2014 task 4: achieved accuracy rate 0.826 and Marco F1 0.741 on Restaurant data set, which are superior to the SA-LSTM-P and TNet-LF model.
- **Publication:** *Hunt Protagonist of Sentiment: Sentiment Analysis via Capsule Network with Sentiment-Aspect Reconstruction*, accepted by *Proc. DASFAA*, 2021.

SELECTED PROJECTS

- **Platform for Image Clustering based on K-means and Spectral Clustering:**
  Developed a K-means and Spectral Clustering application with **PyQt**, **Scipy**, **Pillow** and **Pyinstaller**, enhanced portability and reached 90% accuracy rate.

- **Research on the Approximate Algorithm of the Vertex Cover Problem:**
  Implemented several vertex cover algorithms in **C**. Found and constructed a special graph structure, in which the approximation algorithm would be stronger than the heuristic greedy algorithm.

SELECTED SKILLS

Programming: Python, Java, C/C++, JavaScript, Bash, SQL, HTML, CSS, Matlab, VBA
Tools: Git, Jenkins, Docker, Spring Boot, Jersey, React, MongoDB, SQLite, SQL Server, Tomcat, Nginx, vSphere, JIRA