Computational Fluid Dynamics (CFD)

Wu Chong

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Interest positions

- ★ Data Engineer
- ★ Machine Learning Engineer (PyTorch and Hadoop)
- ★ Spark Engineer
- ★ Bigdata Engineer (Hadoop)

Education Background

- ★ **2018.08-2022.03 Nanyang Technological University Aerospace Engineering Ph.D. candidate**
  (passed qualifying examination and achieved candidate but **quit** myself after that)
  GPA:3.58/5
- ★ **2015.09-2018.06 Beihang University Aerospace Engineering M.E.**
  Rank of average score:60~90/210 GPA:3.24/4
- ★ **2010.09-2014.06 Nanchang Hangkong University Flight Vehicle Propulsion Engineering B.E.**
  Rank of average score: 6/70 GPA:3.324/4

Internet Experience

- ★ 2022.07-2022.07 Constructed personal blog with Hexo
  (Utilized the Hexo theme template and modified its layout; https://didadidaboom.github.io/blog)
- ★ 2022.07-2022.07 Wrote a Dockerfile to build the **Docker Cluster** for wrapping Hadoop Ecosystem
  (Wrote a Dockerfile to wrap Hadoop components, which can be used to construct the recommender system; Docker found by searching Dockerhub ID: didadidaboom; and docker file found at GitHub https://github.com/didadidaboom)
- ★ 2022.03-2022.06 Learnt **neural networks** theory systematically and practiced it by **PyTorch**
  (Lead all the processes from **data collection, cleaning, and pre-processing, to training models**, including deep feedforward networks, RNN, and Gan; Followed a paper and wrote its corresponding algorithm.)
- ★ 2022.02-2022.03 Repeated an open project -“Recommend System: 黑马头条”
  (Practiced **Hadoop ecosystem** and its components, including **Hadoop, Hive, Yarn, Sqoop, and Spark**; Learned how the recommender algorithms developed from item-based and user-based recommendation to model-based recommendation. Lead all the processes from **Flume, HDFS, Spark-SQL, Spark-ML, and Redis, to Recommender**.)
- ★ 2021.12-2022.02 Started a Mini-program project “BKMIST”, which is a social community and was published on the top of previous Mini-program “圈子”
  (The whole project was finished by myself, including concept design, database design, UI design, frontend (Javascript) development, backend (python, Django Rest framework) development, and cloud server deployment; Project found at https://github.com/didadidaboom/bkmist and https://github.com/didadidaboom/bkmist-frontend)
- ★ 2020.05-2020.12 Organization of the development of a social App “圈子”

(Including concept design, the product requirement written, and recruitment of members)

★ 2017.05-2017.10 Organization of the development of the auxiliary software for a trading platform (Including fundraising(in private), product requirement, recruitment of members, and organization of the developers)

Courses related to internet

★ Special Advanced Topic: Digital Image Processing (including the algorithms of facial recognition and picture synthesis)

★ Artificial Intelligence in Game Design (including the algorithms of machine learning, such as supervised learning, unsupervised learning, and reinforcement learning)

Research Experience

★ **2021.03-2021.10 Incorporated the LBFS and GKFS methods into the OpenFOAM (open source; C++)** *(success but the turbulent is still not verified)*

➢ Parallel, 2D and 3D methods.

★ **2020.07-2021.03 Development of Fortran packages for the LBFS and GKFS method** *(success)*

➢ Both the LBFS and GKFS shared a same mesh package, which compacted files. The whole packages included 7-10 files. Do not support parallel running.

★ **2019.07-2020.07 Incorporated the combustion-support Lattice Boltzmann method into the open source, Palabos (C++)** *(failed)*

★ **2018.07-2019.07 Incorporated the Flamelet model into the open source, Cantera (C++), and wrapped them in Python package** *(success)*

➢ Cantera part can be found in https://github.com/CHONGN/cantera.

Programing Skills & Softwares

★ English level: Overall Band Score 6.5 in IELTS and CET-6

★ Computer level: Grade two C programming language, Python(skilled), C++, fortran (skilled) Java(understand), Javascript

★ Professional skills: OpenFOAM, Palabos, ANSYS, CAD, Unity(familar) Django(skilled), pytorch, Hadoop, spark, sql(skilled)

social accounts

★ Github: didadidaboom

★ Dockerhub: dididadidaboom

★ Personal blog: https://didadidaboom.github.io/blog

Awards & Practices

2018-2022 Nanyang Technological University, Research scholarship

2015-2018 Second-class scholarship of Beihang University (3 times) School-level

2010-2011 Merit student of Nanchang Hangkong University School-level

2010-2014 First, Second, Third and Second-class scholarship of Nanchang Hangkong University respectively School-level

The 9th Zhou Peiyuan Mechanics Competition for College students Province-level

201106 Excellent Student Cadre of School of Aircraft Engineering School-level

Academic Achievements

[1]. Wu C, Chan W L. Simulation of Scalar Transport in a Non-Reacting Turbulent Jet using the Lattice Boltzmann Method[C]//APS Division of Fluid Dynamics Meeting Abstracts. 2019: P41. 004.